Adddison’s disease associated with advanced HIV may explain the high mortality

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| Variable | N = 4311 | |
| --- | --- | --- |
| **Age at enrolment** | 37 (9) | |
| **Gender** |  | |
| Female | 218 (51%) | |
| Male | 211 (49%) | |
| **Ethnicity** |  | |
| Asian | 1 (0.2%) | |
| Black African | 357 (83%) | |
| Coloured | 68 (16%) | |
| White | 2 (0.5%) | |
| 1Mean (SD); n (%) | | |
| Variable | | | | | | | | | N = 4311 | | | | | | |
| **HIV-positive, confirmed on ELISA** | | | | | | | | |  | | | | | | |
| Yes | | | | | | | | | 427 (100%) | | | | | | |
| **Total CD4 count...9** | | | | | | | | | 38 (28) | | | | | | |
| **CD4 < 100** | | | | | | | | | 428 (99%) | | | | | | |
| **Opportunistic infection present** | | | | | | | | | 424 (99%) | | | | | | |
| **Oral or inhaled steroids in the last three months** | | | | | | | | | 5 (1.2%) | | | | | | |
| **days since employment** | | | | | | | | | 758 (2,126) | | | | | | |
| **Duration of current illness** | | | | | | | | | 29 (90) | | | | | | |
| 1n (%); Mean (SD) | | | | | | | | | | | | | | | |
| Variable | | | | | | | | | | | | | | | | | | | N = 4311 |
| **Opportunistic infection (choice=Tuberculosis)** | | | | | | | | | | | | | | | | | | |  |
| Checked | | | | | | | | | | | | | | | | | | | 313 (73%) |
| Unchecked | | | | | | | | | | | | | | | | | | | 118 (27%) |
| **Opportunistic infection (choice=Cryptococcus neoformans)** | | | | | | | | | | | | | | | | | | |  |
| Checked | | | | | | | | | | | | | | | | | | | 1 (0.2%) |
| Unchecked | | | | | | | | | | | | | | | | | | | 430 (100%) |
| **Opportunistic infection (choice=Toxoplasmosis)** | | | | | | | | | | | | | | | | | | |  |
| Unchecked | | | | | | | | | | | | | | | | | | | 431 (100%) |
| **Opportunistic infection (choice=Mycobacterium avium-intracellulare)** | | | | | | | | | | | | | | | | | | |  |
| Unchecked | | | | | | | | | | | | | | | | | | | 431 (100%) |
| **Opportunistic infection (choice=Kaposis sarcoma)** | | | | | | | | | | | | | | | | | | |  |
| Checked | | | | | | | | | | | | | | | | | | | 1 (0.2%) |
| Unchecked | | | | | | | | | | | | | | | | | | | 430 (100%) |
| **Opportunistic infection (choice=Cytomegalovirus)** | | | | | | | | | | | | | | | | | | |  |
| Checked | | | | | | | | | | | | | | | | | | | 1 (0.2%) |
| Unchecked | | | | | | | | | | | | | | | | | | | 430 (100%) |
| **Opportunistic infection (choice=Other)** | | | | | | | | | | | | | | | | | | |  |
| Checked | | | | | | | | | | | | | | | | | | | 114 (26%) |
| Unchecked | | | | | | | | | | | | | | | | | | | 317 (74%) |
| 1n (%) | | | | | | | | | | | | | | | | | | | |
| Variable | | | | N = 4311 | | | | | | |
| **BP (systolic)** | | | | 114 (18) | | | | | | |
| **BP (diastolic)** | | | | 69 (13) | | | | | | |
| **Heart rate** | | | | 94 (20) | | | | | | |
| **Hypotension** | | | | 30 (7.3%) | | | | | | |
| **Weakness** | | | | 343 (84%) | | | | | | |
| **Tiredness** | | | | 349 (85%) | | | | | | |
| **Poor appetite** | | | | 307 (75%) | | | | | | |
| **Weight loss** | | | | 363 (88%) | | | | | | |
| **Increased pigmentation of the skin** | | | | 180 (46%) | | | | | | |
| **Nausea** | | | | 209 (51%) | | | | | | |
| 1Mean (SD); n (%) | | | | | | | | | | |
| Variable | | | | | | | N = 4311 | | | | | | |
| **Vomiting** | | | | | | | 112 (27%) | | | | | | |
| **Liking for salt** | | | | | | | 256 (63%) | | | | | | |
| **Hypoglycaemia** | | | | | | | 9 (2.2%) | | | | | | |
| **Loss of consciousness** | | | | | | | 5 (1.2%) | | | | | | |
| **Diarrhoea** | | | | | | | 162 (40%) | | | | | | |
| **Dizziness** | | | | | | | 179 (44%) | | | | | | |
| **Shock** | | | | | | | 5 (1.2%) | | | | | | |
| **Anorexia** | | | | | | | 172 (42%) | | | | | | |
| **Loss of axillary and pubic hair, if female** | | | | | | |  | | | | | | |
| No | | | | | | | 151 (36%) | | | | | | |
| Not applicable | | | | | | | 196 (47%) | | | | | | |
| Yes | | | | | | | 68 (16%) | | | | | | |
| **Any postural drop in blood pressure** | | | | | | | 14 (3.4%) | | | | | | |
| 1n (%) | | | | | | | | | | | | | |
| Variable | | | | | N = 4311 | | | | | | | |
| **Presence of anaemia** | | | | | 223 (55%) | | | | | | | |
| **Total CD4 count...89** | | | | | 38 (28) | | | | | | | |
| **log10 viral load** | | | | | 4.22 (1.48) | | | | | | | |
| **Or, HIV viral load = LDL (choice=LDL)** | | | | |  | | | | | | | |
| Checked | | | | | 1 (0.2%) | | | | | | | |
| Unchecked | | | | | 430 (100%) | | | | | | | |
| **Current tuberculosis** | | | | | 359 (87%) | | | | | | | |
| **Past tuberculosis** | | | | | 230 (57%) | | | | | | | |
| **Electrolytes available** | | | | | 416 (100%) | | | | | | | |
| **Sodium** | | | | | 133.8 (6.5) | | | | | | | |
| **Potassium** | | | | | 4.83 (5.07) | | | | | | | |
| **Urea** | | | | | 12 (24) | | | | | | | |
| 1n (%); Mean (SD) | | | | | | | | | | | | |
| Variable | | | | | | N = 4311 | | | | | | | | |
| **Creatinine** | | | | | | 147 (286) | | | | | | | | |
| **Full blood count (FBC) result available** | | | | | | 399 (100%) | | | | | | | | |
| **Haemoglobin** | | | | | | 10.54 (33.75) | | | | | | | | |
| **White cell count** | | | | | | 12.1 (69.5) | | | | | | | | |
| **Platelets** | | | | | | 245 (156) | | | | | | | | |
| **MCV** | | | | | | 95 (90) | | | | | | | | |
| **Differential on FBC available** | | | | | | 94 (23%) | | | | | | | | |
| **Neutrophils** | | | | | | 25 (107) | | | | | | | | |
| **Lymphocyte count** | | | | | | 3.8 (7.1) | | | | | | | | |
| **Eosinophils** | | | | | | 0.48 (1.18) | | | | | | | | |
| **Basophils** | | | | | |  | | | | | | | | |
| 0 | | | | | | 3 (18%) | | | | | | | | |
| 0.01 | | | | | | 6 (35%) | | | | | | | | |
| 0.029999999 | | | | | | 1 (5.9%) | | | | | | | | |
| 0.039999999 | | | | | | 3 (18%) | | | | | | | | |
| 0.079999998 | | | | | | 1 (5.9%) | | | | | | | | |
| 0.090000004 | | | | | | 1 (5.9%) | | | | | | | | |
| 1.299999952 | | | | | | 1 (5.9%) | | | | | | | | |
| 1.399999976 | | | | | | 1 (5.9%) | | | | | | | | |
| **Aetiology of anaemia** | | | | | |  | | | | | | | | |
| Chronic | | | | | | 139 (64%) | | | | | | | | |
| Folate deficiency | | | | | | 3 (1.4%) | | | | | | | | |
| Iron deficiency | | | | | | 39 (18%) | | | | | | | | |
| Other | | | | | | 23 (11%) | | | | | | | | |
| Vitamin B12 | | | | | | 14 (6.4%) | | | | | | | | |
| 1Mean (SD); n (%) | | | | | | | | | | | | | | |
| Variable | | | | | | | | | | N = 4311 | | | | | | |
| **Random cortisol result** | | | | | | | | | | 488 (179) | | | | | | |
| **Random cortisol result coded** | | | | | | | | | |  | | | | | | |
| (80,500] | | | | | | | | | | 220 (58%) | | | | | | |
| (500,1.4e+03] | | | | | | | | | | 160 (42%) | | | | | | |
| **ACTH result** | | | | | | | | | | 41 (38) | | | | | | |
| **ACTH result coded** | | | | | | | | | |  | | | | | | |
| (0,13.9] | | | | | | | | | | 62 (16%) | | | | | | |
| (13.9,500] | | | | | | | | | | 319 (84%) | | | | | | |
| **Antibodies sample drawn** | | | | | | | | | |  | | | | | | |
| Yes | | | | | | | | | | 387 (100%) | | | | | | |
| **Confirm random cortisol < 500 nmol/L** | | | | | | | | | | 220 (51%) | | | | | | |
| **Confirm patient not on steroids for past 3 months** | | | | | | | | | | 355 (93%) | | | | | | |
| **Synacthen: 0 minute cortisol result** | | | | | | | | | | 458 (202) | | | | | | |
| **Synacthen: 30 minute cortisol result** | | | | | | | | | | 693 (231) | | | | | | |
| **addisons\_disease** | | | | | | | | | | 30 (9.4%) | | | | | | |
| 1Mean (SD); n (%) | | | | | | | | | | | | | | | | |
| Variable | | N = 4311 | | | | | |
| **CT scan done** | |  | | | | | |
| No | | 375 (100%) | | | | | |
| **Bilateral adrenal enlargement** | | 0 (NA%) | | | | | |
| **Calcification** | | 0 (NA%) | | | | | |
| **Atrophy** | | 0 (NA%) | | | | | |
| **Haemorrhage** | | 0 (NA%) | | | | | |
| **Nodularity** | | 0 (NA%) | | | | | |
| **Outcome of hospitalization** | |  | | | | | |
| Demised --> EXIT form | | 49 (15%) | | | | | |
| Discharged home | | 276 (85%) | | | | | |
| Other | | 1 (0.3%) | | | | | |
| 1n (%) | | | | | | | |
| Variable | | | | | | | | | | | | N = 4311 | | | | | |
| **3 followup\_done** | | | | | | | | | | | | 102 (37%) | | | | | |
| **3 followup\_patientstatus** | | | | | | | | | | | |  | | | | | |
| Alive | | | | | | | | | | | | 128 (83%) | | | | | |
| Deceased --> EXIT form | | | | | | | | | | | | 27 (17%) | | | | | |
| **3 followup\_patientcondition** | | | | | | | | | | | |  | | | | | |
| Deteriorated | | | | | | | | | | | | 4 (4.4%) | | | | | |
| Improved | | | | | | | | | | | | 85 (94%) | | | | | |
| Unchanged | | | | | | | | | | | | 1 (1.1%) | | | | | |
| **6 followup\_done** | | | | | | | | | | | | 113 (42%) | | | | | |
| **6 followup\_patientstatus** | | | | | | | | | | | |  | | | | | |
| Alive | | | | | | | | | | | | 130 (79%) | | | | | |
| Deceased --> EXIT form | | | | | | | | | | | | 35 (21%) | | | | | |
| **6 followup\_patientcondition** | | | | | | | | | | | |  | | | | | |
| Deteriorated | | | | | | | | | | | | 2 (2.0%) | | | | | |
| Improved | | | | | | | | | | | | 94 (96%) | | | | | |
| Unchanged | | | | | | | | | | | | 2 (2.0%) | | | | | |
| **12 followup\_done** | | | | | | | | | | | | 154 (62%) | | | | | |
| **12 followup\_patientstatus** | | | | | | | | | | | |  | | | | | |
| Alive | | | | | | | | | | | | 142 (76%) | | | | | |
| Deceased --> EXIT form | | | | | | | | | | | | 44 (24%) | | | | | |
| **12 followup\_patientcondition** | | | | | | | | | | | |  | | | | | |
| Deteriorated | | | | | | | | | | | | 6 (4.3%) | | | | | |
| Improved | | | | | | | | | | | | 127 (91%) | | | | | |
| Unchanged | | | | | | | | | | | | 7 (5.0%) | | | | | |
| **If deceased, cause of death** | | | | | | | | | | | |  | | | | | |
| + MDR | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Acute gastroenteritis hypocalemia | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Acute kidney injury | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Cancer | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Cancer (According to the wife) | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Chronic diarrhea | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Chronic kidney disease, stage 5 | | | | | | | | | | | | 1 (1.1%) | | | | | |
| COPD | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Cryptococcal meningitis | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Diss. TB | | | | | | | | | | | | 4 (4.4%) | | | | | |
| Diss/TB | | | | | | | | | | | | 2 (2.2%) | | | | | |
| Double Pneumonia | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Drug induced liver injury (DILI) | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Drug induced pancreatitis | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Female pelvic inflammatory disease, unspecified | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Gastroenteritis | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Head Trauma | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Hepatitis B | | | | | | | | | | | | 1 (1.1%) | | | | | |
| HIV | | | | | | | | | | | | 1 (1.1%) | | | | | |
| HIV-Encephalous | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Interstitial pulmonary disease | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Jaundice | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Kaposi Sarcoma | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Kidney failure | | | | | | | | | | | | 2 (2.2%) | | | | | |
| Kidney failure and PTB | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Liver failure | | | | | | | | | | | | 1 (1.1%) | | | | | |
| LRTI/RVD | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Lymphoid. Haematopoietic related tissue | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Lymphoma | | | | | | | | | | | | 2 (2.2%) | | | | | |
| MDR | | | | | | | | | | | | 1 (1.1%) | | | | | |
| MDR Chronic Diarrhoea | | | | | | | | | | | | 1 (1.1%) | | | | | |
| MDR TB | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Meningitis | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Meningitis / MDR TB | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Natural causes | | | | | | | | | | | | 7 (7.7%) | | | | | |
| No diagnosis | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Oesophageal Conditis | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Pancytopenia and TB | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Pneumonia | | | | | | | | | | | | 2 (2.2%) | | | | | |
| PTB | | | | | | | | | | | | 6 (6.6%) | | | | | |
| PTB/Diss. TB | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Pulmonary TB | | | | | | | | | | | | 3 (3.3%) | | | | | |
| Renal failure | | | | | | | | | | | | 2 (2.2%) | | | | | |
| Renal Failure | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Respiratory Pneumonia | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Seizures | | | | | | | | | | | | 2 (2.2%) | | | | | |
| Sepsis | | | | | | | | | | | | 2 (2.2%) | | | | | |
| Sepsis TB | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Sepsis/TBM | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Sepsis? Had boil in neck | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Septicemia | | | | | | | | | | | | 1 (1.1%) | | | | | |
| TB | | | | | | | | | | | | 1 (1.1%) | | | | | |
| TB and heart failure | | | | | | | | | | | | 1 (1.1%) | | | | | |
| TB and Meningitis | | | | | | | | | | | | 1 (1.1%) | | | | | |
| TB Default | | | | | | | | | | | | 2 (2.2%) | | | | | |
| TB intestines | | | | | | | | | | | | 1 (1.1%) | | | | | |
| TB Meningitis | | | | | | | | | | | | 1 (1.1%) | | | | | |
| TB/Ascites | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Tuberculosis | | | | | | | | | | | | 1 (1.1%) | | | | | |
| unknown | | | | | | | | | | | | 1 (1.1%) | | | | | |
| Unknown | | | | | | | | | | | | 7 (7.7%) | | | | | |
| 1n (%) | | | | | | | | | | | | | | | | | |

# Table 2: Patients diagnosed with hypoadrenalism in advanced HIV study, compred to those with normal adreal function

## Socio-demographics by hypoadrenalism + advanced HIV and without

patients with hypoadrenalism with advanced HIV (CD4<100) and not on steriods whether oral or injectable

| Characteristic | N | OR1 | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| Age at enrolment | 320 | 1.00 | 0.96, 1.05 | 0.8 |
| gender | 320 |  |  |  |
| Female |  | — | — |  |
| Male |  | 1.03 | 0.48, 2.23 | >0.9 |
| ethnicity | 319 |  |  |  |
| Asian |  | — | — |  |
| Black African |  | 604,812 | 0.00, NA | >0.9 |
| Coloured |  | 470,026 | 0.00, NA | >0.9 |
| White |  | 1.00 | 0.00, 252,405,882,915,600,544 | >0.9 |
| 1OR = Odds Ratio, CI = Confidence Interval | | | | |

# Table 2: Signs by hypoadrenalism + advanced HIV and without

| Characteristic | N | OR1 | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| BP (systolic) | 320 | 1.01 | 0.99, 1.03 | 0.3 |
| BP (diastolic) | 320 | 1.02 | 0.99, 1.05 | 0.2 |
| Heart rate | 320 | 0.99 | 0.97, 1.01 | 0.5 |
| Hypotension | 306 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.39 | 0.02, 1.99 | 0.4 |
| Weakness | 307 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.32 | 0.13, 0.82 | 0.012 |
| Tiredness | 308 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.33 | 0.13, 0.96 | 0.029 |
| Poor appetite | 305 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.93 | 0.38, 2.62 | 0.9 |
| Weight loss | 309 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.41 | 0.15, 1.31 | 0.10 |
| Increased pigmentation of the skin | 293 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.71 | 0.30, 1.61 | 0.4 |
| Nausea | 308 |  |  |  |
| No |  | — | — |  |
| Yes |  | 1.11 | 0.51, 2.42 | 0.8 |
| 1OR = Odds Ratio, CI = Confidence Interval | | | | |

# Table 2: Signs by hypoadrenalism + advanced HIV and without - Continued 2

| Characteristic | N | OR1 | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| Vomiting | 307 |  |  |  |
| No |  | — | — |  |
| Yes |  | 1.35 | 0.58, 2.98 | 0.5 |
| Liking for salt | 306 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.85 | 0.38, 1.98 | 0.7 |
| Hypoglycaemia | 307 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.00 |  | >0.9 |
| Loss of consciousness | 305 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.00 |  | >0.9 |
| Diarrhoea | 305 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.72 | 0.31, 1.56 | 0.4 |
| Dizziness | 306 |  |  |  |
| No |  | — | — |  |
| Yes |  | 1.14 | 0.52, 2.50 | 0.7 |
| Shock | 309 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.00 |  | >0.9 |
| Anorexia | 307 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.47 | 0.19, 1.05 | 0.078 |
| Loss of axillary and pubic hair, if female | 310 |  |  |  |
| No |  | — | — |  |
| Not applicable |  | 0.81 | 0.36, 1.83 | 0.6 |
| Yes |  | 0.30 | 0.05, 1.14 | 0.12 |
| Any postural drop in blood pressure | 307 |  |  |  |
| No |  | — | — |  |
| Yes |  | 0.87 | 0.05, 4.71 | 0.9 |
| 1OR = Odds Ratio, CI = Confidence Interval | | | | |

# Table 2: Signs by hypoadrenalism + advanced HIV and without - Continued 3

| Characteristic | N | | | OR1 | | | | 95% CI1 | | p-value | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Presence of anaemia | 304 | | |  | | | |  | |  | |
| No |  | | | — | | | | — | |  | |
| Yes |  | | | 1.00 | | | | 0.46, 2.18 | | >0.9 | |
| Total CD4 count | 319 | | | 1.00 | | | | 0.98, 1.01 | | 0.5 | |
| log10 viral load | 65 | | | 1.53 | | | | 0.64, 5.14 | | 0.4 | |
| Or, HIV viral load = LDL (choice=LDL) | 321 | | |  | | | |  | |  | |
| Checked |  | | | — | | | | — | |  | |
| Unchecked |  | | | 211,090 | | | | 0.00, NA | | >0.9 | |
| Current tuberculosis | 309 | | |  | | | |  | |  | |
| No |  | | | — | | | | — | |  | |
| Yes |  | | | 0.34 | | | | 0.14, 0.91 | | 0.023 | |
| Past tuberculosis | 302 | | |  | | | |  | |  | |
| No |  | | | — | | | | — | |  | |
| Yes |  | | | 0.83 | | | | 0.38, 1.82 | | 0.6 | |
| Sodium | 305 | | | 1.03 | | | | 0.98, 1.08 | | 0.2 | |
| Potassium | 306 | | | 1.06 | | | | 0.99, 1.13 | | 0.045 | |
| Urea | 304 | | | 0.99 | | | | 0.95, 1.01 | | 0.6 | |
| 1OR = Odds Ratio, CI = Confidence Interval | | | | | | | | | | | |
| Characteristic | | N | | | OR1 | | 95% CI1 | | p-value | |
| Creatinine | | 319 | | | 1.00 | | 1.00, 1.00 | | 0.4 | |
| Full blood count (FBC) result available | | 298 | | |  | |  | |  | |
| No | |  | | | — | | — | |  | |
| Yes | |  | | | 0.00 | |  | | >0.9 | |
| Haemoglobin | | 319 | | | 1.02 | | 0.86, 1.21 | | 0.8 | |
| White cell count | | 318 | | | 1.00 | |  | | 0.8 | |
| Platelets | | 315 | | | 1.00 | | 1.00, 1.00 | | 0.4 | |
| MCV | | 294 | | | 1.00 | | 0.99, 1.00 | | >0.9 | |
| Differential on FBC available | | 306 | | |  | |  | |  | |
| No | |  | | | — | | — | |  | |
| Yes | |  | | | 1.23 | | 0.47, 2.89 | | 0.7 | |
| Neutrophils | | 61 | | | 1.01 | | 1.00, 1.03 | | 0.12 | |
| Lymphocyte count | | 62 | | | 1.05 | | 0.94, 1.15 | | 0.3 | |
| Eosinophils | | 41 | | | 2.14 | | 1.03, 9.21 | | 0.14 | |
| Basophils | | 15 | | | 0.00 | | 0.00, 0.00 | | 0.5 | |
| Aetiology of anaemia | | 165 | | |  | |  | |  | |
| Chronic | |  | | | — | | — | |  | |
| Folate deficiency | |  | | | 8.33 | | 0.36, 100 | | 0.10 | |
| Iron deficiency | |  | | | 3.03 | | 0.72, 11.5 | | 0.11 | |
| Other | |  | | | 5.13 | | 1.18, 20.5 | | 0.021 | |
| Vitamin B12 | |  | | | 1.39 | | 0.07, 9.14 | | 0.8 | |
| 1OR = Odds Ratio, CI = Confidence Interval | | | | | | | | | | |
| Characteristic | | | N | | | OR1 | | | | | | | 95% CI1 | p-value |
| 3 followup\_done | | | 228 | | |  | | | | | | |  |  |
| No | | |  | | | — | | | | | | | — |  |
| Yes | | |  | | | 1.13 | | | | | | | 0.47, 2.58 | 0.8 |
| 3 followup\_patientstatus | | | 126 | | |  | | | | | | |  |  |
| Alive | | |  | | | — | | | | | | | — |  |
| Deceased --> EXIT form | | |  | | | 1.39 | | | | | | | 0.29, 5.13 | 0.6 |
| 3 followup\_patientcondition | | | 72 | | |  | | | | | | |  |  |
| Deteriorated | | |  | | | — | | | | | | | — |  |
| Improved | | |  | | | 0.06 | | | | | | | 0.00, 0.67 | 0.026 |
| Unchanged | | |  | | | 0.00 | | | | | | |  | >0.9 |
| 6 followup\_done | | | 226 | | |  | | | | | | |  |  |
| No | | |  | | | — | | | | | | | — |  |
| Yes | | |  | | | 1.05 | | | | | | | 0.45, 2.42 | >0.9 |
| 6 followup\_patientstatus | | | 137 | | |  | | | | | | |  |  |
| Alive | | |  | | | — | | | | | | | — |  |
| Deceased --> EXIT form | | |  | | | 1.60 | | | | | | | 0.41, 5.32 | 0.5 |
| 6 followup\_patientcondition | | | 84 | | |  | | | | | | |  |  |
| Deteriorated | | |  | | | — | | | | | | | — |  |
| Improved | | |  | | | 0.08 | | | | | | | 0.00, 2.22 | 0.089 |
| Unchanged | | |  | | | 0.00 | | | | | | |  | >0.9 |
| 12 followup\_done | | | 212 | | |  | | | | | | |  |  |
| No | | |  | | | — | | | | | | | — |  |
| Yes | | |  | | | 0.54 | | | | | | | 0.22, 1.29 | 0.2 |
| 12 followup\_patientstatus | | | 158 | | |  | | | | | | |  |  |
| Alive | | |  | | | — | | | | | | | — |  |
| Deceased --> EXIT form | | |  | | | 1.17 | | | | | | | 0.31, 3.66 | 0.8 |
| 12 followup\_patientcondition | | | 119 | | |  | | | | | | |  |  |
| Deteriorated | | |  | | | — | | | | | | | — |  |
| Improved | | |  | | | 0.18 | | | | | | | 0.02, 4.09 | 0.2 |
| Unchanged | | |  | | | 0.00 | | | | | | |  | >0.9 |
| If deceased, cause of death | | | 76 | | |  | | | | | | |  |  |
| + MDR | | |  | | | — | | | | | | | — |  |
| Acute gastroenteritis hypocalemia | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Acute kidney injury | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Cancer | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Cancer (According to the wife) | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Chronic diarrhea | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Chronic kidney disease, stage 5 | | |  | | | 39,869,252,698,223,566,848 | | | | | | | 0.00, NA | >0.9 |
| COPD | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Cryptococcal meningitis | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Diss. TB | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Diss/TB | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Double Pneumonia | | |  | | | 39,869,252,233,939,902,464 | | | | | | | 0.00, NA | >0.9 |
| Drug induced liver injury (DILI) | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Drug induced pancreatitis | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Gastroenteritis | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Hepatitis B | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| HIV | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Interstitial pulmonary disease | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Jaundice | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Kaposi Sarcoma | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Kidney failure | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Liver failure | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Lymphoid. Haematopoietic related tissue | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Lymphoma | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| MDR | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| MDR Chronic Diarrhoea | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| MDR TB | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Meningitis | | |  | | | 39,869,255,185,048,780,800 | | | | | | | 0.00, NA | >0.9 |
| Meningitis / MDR TB | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Natural causes | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| No diagnosis | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Oesophageal Conditis | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Pneumonia | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| PTB | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| PTB/Diss. TB | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Pulmonary TB | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Renal failure | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Renal Failure | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Respiratory Pneumonia | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Seizures | | |  | | | 39,869,252,225,723,695,104 | | | | | | | 0.00, NA | >0.9 |
| Sepsis TB | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Sepsis/TBM | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Sepsis? Had boil in neck | | |  | | | 39,869,252,712,504,115,200 | | | | | | | 0.00, NA | >0.9 |
| Septicemia | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| TB and heart failure | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| TB and Meningitis | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| TB Default | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| TB intestines | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| TB Meningitis | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| TB/Ascites | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Tuberculosis | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| unknown | | |  | | | 1.00 | | | | | | | 0.00, Inf | >0.9 |
| Unknown | | |  | | | 1,262,842,047 | | | | | | | 0.00, NA | >0.9 |
| 1OR = Odds Ratio, CI = Confidence Interval | | | | | | | | | | | | | | |

# Table 3: Clinical features predictive of hypoadrenalism–addisons\_disease (hypoadrenalism status of study paticipants) vs other variables

| Variable | N | 0, N = 2881 | | 1, N = 301 | | | p-value2 | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Age at enrolment** | 318 | 37 (9) | | 37 (9) | | | 0.9 | | |
| **gender** | 318 |  | |  | | | >0.9 | | |
| Female |  | 151 (52%) | | 16 (53%) | | |  | | |
| Male |  | 137 (48%) | | 14 (47%) | | |  | | |
| **ethnicity** | 317 |  | |  | | | 0.9 | | |
| Asian |  | 1 (0.3%) | | 0 (0%) | | |  | | |
| Black African |  | 235 (82%) | | 26 (87%) | | |  | | |
| Coloured |  | 49 (17%) | | 4 (13%) | | |  | | |
| White |  | 2 (0.7%) | | 0 (0%) | | |  | | |
| 1Mean (SD); n (%) | | | | | | | | | |
| 2Wilcoxon rank sum test; Pearson's Chi-squared test; Fisher's exact test | | | | | | | | | |
| Variable | | | | | | N | | 0, N = 2881 | | | 1, N = 301 | | | p-value2 |
| **HIV-positive, confirmed on ELISA** | | | | | | 316 | |  | | |  | | |  |
| Yes | | | | | |  | | 286 (100%) | | | 30 (100%) | | |  |
| **Total CD4 count** | | | | | | 317 | | 37 (27) | | | 34 (28) | | | 0.6 |
| **CD4 < 100** | | | | | | 318 | | 286 (99%) | | | 30 (100%) | | | >0.9 |
| **Opportunistic infection present** | | | | | | 317 | | 287 (100%) | | | 30 (100%) | | | >0.9 |
| **Oral or inhaled steroids in the last three months** | | | | | | 315 | | 2 (0.7%) | | | 1 (3.3%) | | | 0.3 |
| **days since employment** | | | | | | 50 | | 570 (2,100) | | | 2,456 (1,561) | | | 0.035 |
| **Duration of current illness** | | | | | | 300 | | 35 (109) | | | 20 (15) | | | 0.4 |
| 1n (%); Mean (SD) | | | | | | | | | | | | | | |
| 2Wilcoxon rank sum test; Fisher's exact test | | | | | | | | | | | | | | |
| Characteristic | | | N | | 0, N = 2881 | | | | 1, N = 301 | | | p-value2 |
| Tuberculosis | | | 318 | |  | | | |  | | | 0.018 |
| Checked | | |  | | 220 (76%) | | | | 17 (57%) | | |  |
| Unchecked | | |  | | 68 (24%) | | | | 13 (43%) | | |  |
| Cryptococcus neoformans | | | 318 | |  | | | |  | | | >0.9 |
| Checked | | |  | | 0 (0%) | | | | 0 (0%) | | |  |
| Unchecked | | |  | | 288 (100%) | | | | 30 (100%) | | |  |
| Toxoplasmosis | | | 318 | |  | | | |  | | |  |
| Unchecked | | |  | | 288 (100%) | | | | 30 (100%) | | |  |
| Mycobacterium avium-intracellulare | | | 318 | |  | | | |  | | |  |
| Unchecked | | |  | | 288 (100%) | | | | 30 (100%) | | |  |
| Kaposis sarcoma | | | 318 | |  | | | |  | | | >0.9 |
| Checked | | |  | | 1 (0.3%) | | | | 0 (0%) | | |  |
| Unchecked | | |  | | 287 (100%) | | | | 30 (100%) | | |  |
| Cytomegalovirus | | | 318 | |  | | | |  | | | 0.094 |
| Checked | | |  | | 0 (0%) | | | | 1 (3.3%) | | |  |
| Unchecked | | |  | | 288 (100%) | | | | 29 (97%) | | |  |
| Other | | | 318 | |  | | | |  | | | 0.044 |
| Checked | | |  | | 75 (26%) | | | | 13 (43%) | | |  |
| Unchecked | | |  | | 213 (74%) | | | | 17 (57%) | | |  |
| 1n (%) | | | | | | | | | | | | |
| 2Pearson's Chi-squared test; Fisher's exact test | | | | | | | | | | | | |

# A tibble: 431 x 8

Tuberculosis Cryptococcus ~ Toxoplasmosis Mycobacterium~ Kaposis sarco~   
1 Unchecked Unchecked Unchecked Unchecked Unchecked  
2 Unchecked Unchecked Unchecked Unchecked Unchecked  
3 Checked Unchecked Unchecked Unchecked Unchecked  
4 Unchecked Unchecked Unchecked Unchecked Unchecked  
5 Checked Unchecked Unchecked Unchecked Unchecked  
6 Unchecked Unchecked Unchecked Unchecked Unchecked  
7 Unchecked Unchecked Unchecked Unchecked Unchecked  
8 Unchecked Unchecked Unchecked Unchecked Unchecked  
9 Unchecked Unchecked Unchecked Unchecked Unchecked  
10 Checked Unchecked Unchecked Unchecked Unchecked  
# … with 421 more rows, and 3 more variables: Cytomegalovirus , # Other , addisons\_disease

| Variable | | N | | | | | 0, N = 2881 | | | | | | 1, N = 301 | | | | | | p-value2 | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **BP (systolic)** | | 318 | | | | | 114 (18) | | | | | | 118 (15) | | | | | | 0.13 | | | | | |
| **BP (diastolic)** | | 318 | | | | | 69 (12) | | | | | | 72 (11) | | | | | | 0.093 | | | | | |
| **Heart rate** | | 318 | | | | | 96 (20) | | | | | | 92 (20) | | | | | | 0.4 | | | | | |
| **Hypotension** | | 305 | | | | | 22 (8.0%) | | | | | | 1 (3.3%) | | | | | | 0.7 | | | | | |
| **Weakness** | | 306 | | | | | 246 (89%) | | | | | | 22 (73%) | | | | | | 0.020 | | | | | |
| **Tiredness** | | 307 | | | | | 255 (92%) | | | | | | 24 (80%) | | | | | | 0.042 | | | | | |
| **Poor appetite** | | 304 | | | | | 220 (80%) | | | | | | 24 (80%) | | | | | | >0.9 | | | | | |
| **Weight loss** | | 308 | | | | | 257 (92%) | | | | | | 25 (83%) | | | | | | 0.2 | | | | | |
| **Increased pigmentation of the skin** | | 292 | | | | | 129 (48%) | | | | | | 10 (38%) | | | | | | 0.3 | | | | | |
| **Nausea** | | 307 | | | | | 147 (53%) | | | | | | 16 (53%) | | | | | | >0.9 | | | | | |
| 1Mean (SD); n (%) | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Wilcoxon rank sum test; Fisher's exact test; Pearson's Chi-squared test | | | | | | | | | | | | | | | | | | | | | | | | |
| Variable | | | | | | N | | | | 0, N = 2881 | | | | | | | 1, N = 301 | | | | p-value2 | | | | |
| **Vomiting** | | | | | | 306 | | | | 78 (28%) | | | | | | | 10 (33%) | | | | 0.6 | | | | |
| **Liking for salt** | | | | | | 305 | | | | 189 (68%) | | | | | | | 18 (62%) | | | | 0.5 | | | | |
| **Hypoglycaemia** | | | | | | 306 | | | | 7 (2.5%) | | | | | | | 0 (0%) | | | | >0.9 | | | | |
| **Loss of consciousness** | | | | | | 304 | | | | 2 (0.7%) | | | | | | | 0 (0%) | | | | >0.9 | | | | |
| **Diarrhoea** | | | | | | 304 | | | | 117 (43%) | | | | | | | 10 (33%) | | | | 0.3 | | | | |
| **Dizziness** | | | | | | 305 | | | | 129 (47%) | | | | | | | 15 (52%) | | | | 0.6 | | | | |
| **Shock** | | | | | | 308 | | | | 3 (1.1%) | | | | | | | 0 (0%) | | | | >0.9 | | | | |
| **Anorexia** | | | | | | 306 | | | | 125 (45%) | | | | | | | 8 (27%) | | | | 0.051 | | | | |
| **Loss of axillary and pubic hair, if female** | | | | | | 309 | | | |  | | | | | | |  | | | | 0.2 | | | | |
| No | | | | | |  | | | | 97 (35%) | | | | | | | 14 (47%) | | | |  | | | | |
| Not applicable | | | | | |  | | | | 131 (47%) | | | | | | | 14 (47%) | | | |  | | | | |
| Yes | | | | | |  | | | | 51 (18%) | | | | | | | 2 (6.7%) | | | |  | | | | |
| **Any postural drop in blood pressure** | | | | | | 306 | | | | 11 (4.0%) | | | | | | | 1 (3.3%) | | | | >0.9 | | | | |
| 1n (%) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Pearson's Chi-squared test; Fisher's exact test | | | | | | | | | | | | | | | | | | | | | | | | | |
| Variable | | | | N | | | | 0, N = 2881 | | | | | | | 1, N = 301 | | | | | | | p-value2 | | | | | |
| **Presence of anaemia** | | | | 303 | | | | 151 (55%) | | | | | | | 16 (53%) | | | | | | | 0.8 | | | | | |
| **log10 viral load** | | | | 65 | | | | 4.23 (1.45) | | | | | | | 4.96 (0.38) | | | | | | | 0.6 | | | | | |
| **Or, HIV viral load = LDL (choice=LDL)** | | | | 318 | | | |  | | | | | | |  | | | | | | | >0.9 | | | | | |
| Checked | | | |  | | | | 1 (0.3%) | | | | | | | 0 (0%) | | | | | | |  | | | | | |
| Unchecked | | | |  | | | | 287 (100%) | | | | | | | 30 (100%) | | | | | | |  | | | | | |
| **Current tuberculosis** | | | | 307 | | | | 250 (90%) | | | | | | | 23 (77%) | | | | | | | 0.034 | | | | | |
| **Past tuberculosis** | | | | 301 | | | | 161 (59%) | | | | | | | 17 (57%) | | | | | | | 0.8 | | | | | |
| **Electrolytes available** | | | | 312 | | | | 284 (100%) | | | | | | | 28 (100%) | | | | | | | >0.9 | | | | | |
| **Sodium** | | | | 303 | | | | 133.5 (6.8) | | | | | | | 135.1 (4.8) | | | | | | | 0.10 | | | | | |
| **Potassium** | | | | 304 | | | | 4.45 (3.12) | | | | | | | 6.17 (8.38) | | | | | | | 0.4 | | | | | |
| **Urea** | | | | 302 | | | | 11 (18) | | | | | | | 9 (9) | | | | | | | 0.7 | | | | | |
| 1n (%); Mean (SD) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Pearson's Chi-squared test; Wilcoxon rank sum test; Fisher's exact test | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Variable | | | | | N | | | | 0, N = 2881 | | | | | | | 1, N = 301 | | | | | | | p-value2 | | | | | |
| **Creatinine** | | | | | 317 | | | | 143 (302) | | | | | | | 192 (326) | | | | | | | 0.078 | | | | | |
| **Full blood count (FBC) result available** | | | | | 296 | | | | 268 (100%) | | | | | | | 27 (96%) | | | | | | | 0.095 | | | | | |
| **Haemoglobin** | | | | | 317 | | | | 8.97 (2.23) | | | | | | | 9.05 (2.11) | | | | | | | >0.9 | | | | | |
| **White cell count** | | | | | 316 | | | | 14.3 (84.1) | | | | | | | 10.4 (16.3) | | | | | | | 0.5 | | | | | |
| **Platelets** | | | | | 313 | | | | 251 (157) | | | | | | | 218 (161) | | | | | | | 0.2 | | | | | |
| **MCV** | | | | | 292 | | | | 90 (66) | | | | | | | 90 (11) | | | | | | | 0.088 | | | | | |
| **Differential on FBC available** | | | | | 304 | | | | 57 (21%) | | | | | | | 7 (23%) | | | | | | | 0.7 | | | | | |
| **Neutrophils** | | | | | 61 | | | | 11 (22) | | | | | | | 70 (156) | | | | | | | 0.7 | | | | | |
| **Lymphocyte count** | | | | | 62 | | | | 3.0 (5.8) | | | | | | | 6.3 (13.4) | | | | | | | 0.3 | | | | | |
| **Eosinophils** | | | | | 41 | | | | 0.23 (0.44) | | | | | | | 1.55 (2.80) | | | | | | | 0.2 | | | | | |
| **Basophils** | | | | | 15 | | | |  | | | | | | |  | | | | | | | >0.9 | | | | | |
| 0 | | | | |  | | | | 2 (15%) | | | | | | | 0 (0%) | | | | | | |  | | | | | |
| 0.01 | | | | |  | | | | 4 (31%) | | | | | | | 2 (100%) | | | | | | |  | | | | | |
| 0.029999999 | | | | |  | | | | 1 (7.7%) | | | | | | | 0 (0%) | | | | | | |  | | | | | |
| 0.039999999 | | | | |  | | | | 2 (15%) | | | | | | | 0 (0%) | | | | | | |  | | | | | |
| 0.079999998 | | | | |  | | | | 1 (7.7%) | | | | | | | 0 (0%) | | | | | | |  | | | | | |
| 0.090000004 | | | | |  | | | | 1 (7.7%) | | | | | | | 0 (0%) | | | | | | |  | | | | | |
| 1.299999952 | | | | |  | | | | 1 (7.7%) | | | | | | | 0 (0%) | | | | | | |  | | | | | |
| 1.399999976 | | | | |  | | | | 1 (7.7%) | | | | | | | 0 (0%) | | | | | | |  | | | | | |
| **Aetiology of anaemia** | | | | | 164 | | | |  | | | | | | |  | | | | | | | 0.040 | | | | | |
| Chronic | | | | |  | | | | 99 (67%) | | | | | | | 6 (38%) | | | | | | |  | | | | | |
| Folate deficiency | | | | |  | | | | 2 (1.4%) | | | | | | | 1 (6.2%) | | | | | | |  | | | | | |
| Iron deficiency | | | | |  | | | | 22 (15%) | | | | | | | 4 (25%) | | | | | | |  | | | | | |
| Other | | | | |  | | | | 13 (8.8%) | | | | | | | 4 (25%) | | | | | | |  | | | | | |
| Vitamin B12 | | | | |  | | | | 12 (8.1%) | | | | | | | 1 (6.2%) | | | | | | |  | | | | | |
| 1Mean (SD); n (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Wilcoxon rank sum test; Fisher's exact test; Pearson's Chi-squared test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Variable | N | | 0, N = 2881 | | | | | | | | | 1, N = 301 | | | | | | p-value2 | | | | | |
| **CT scan done** | 311 | |  | | | | | | | | |  | | | | | |  | | | | | |
| No |  | | 283 (100%) | | | | | | | | | 28 (100%) | | | | | |  | | | | | |
| **Bilateral adrenal enlargement** | 0 | | 0 (NA%) | | | | | | | | | 0 (NA%) | | | | | |  | | | | | |
| **Calcification** | 0 | | 0 (NA%) | | | | | | | | | 0 (NA%) | | | | | |  | | | | | |
| **Atrophy** | 0 | | 0 (NA%) | | | | | | | | | 0 (NA%) | | | | | |  | | | | | |
| **Haemorrhage** | 0 | | 0 (NA%) | | | | | | | | | 0 (NA%) | | | | | |  | | | | | |
| **Nodularity** | 0 | | 0 (NA%) | | | | | | | | | 0 (NA%) | | | | | |  | | | | | |
| **Outcome of hospitalization** | 272 | |  | | | | | | | | |  | | | | | | 0.020 | | | | | |
| Demised --> EXIT form |  | | 40 (16%) | | | | | | | | | 0 (0%) | | | | | |  | | | | | |
| Discharged home |  | | 204 (84%) | | | | | | | | | 28 (100%) | | | | | |  | | | | | |
| Other |  | | 0 (0%) | | | | | | | | | 0 (0%) | | | | | |  | | | | | |
| 1n (%) | | | | | | | | | | | | | | | | | | | | | | | |
| 2Fisher's exact test | | | | | | | | | | | | | | | | | | | | | | | |
| Variable | | | | | | | | | | | N | | | 0, N = 2881 | | | | | | 1, N = 301 | | | | | | | p-value2 | | |
| **3 followup\_done** | | | | | | | | | | | 228 | | | 72 (36%) | | | | | | 10 (37%) | | | | | | | >0.9 | | |
| **3 followup\_patientstatus** | | | | | | | | | | | 126 | | |  | | | | | |  | | | | | | | 0.7 | | |
| Alive | | | | | | | | | | |  | | | 92 (81%) | | | | | | 9 (75%) | | | | | | |  | | |
| Deceased --> EXIT form | | | | | | | | | | |  | | | 22 (19%) | | | | | | 3 (25%) | | | | | | |  | | |
| **3 followup\_patientcondition** | | | | | | | | | | | 72 | | |  | | | | | |  | | | | | | | 0.074 | | |
| Deteriorated | | | | | | | | | | |  | | | 1 (1.6%) | | | | | | 2 (22%) | | | | | | |  | | |
| Improved | | | | | | | | | | |  | | | 61 (97%) | | | | | | 7 (78%) | | | | | | |  | | |
| Unchanged | | | | | | | | | | |  | | | 1 (1.6%) | | | | | | 0 (0%) | | | | | | |  | | |
| **6 followup\_done** | | | | | | | | | | | 226 | | | 86 (43%) | | | | | | 11 (42%) | | | | | | | >0.9 | | |
| **6 followup\_patientstatus** | | | | | | | | | | | 137 | | |  | | | | | |  | | | | | | | 0.5 | | |
| Alive | | | | | | | | | | |  | | | 97 (78%) | | | | | | 9 (69%) | | | | | | |  | | |
| Deceased --> EXIT form | | | | | | | | | | |  | | | 27 (22%) | | | | | | 4 (31%) | | | | | | |  | | |
| **6 followup\_patientcondition** | | | | | | | | | | | 84 | | |  | | | | | |  | | | | | | | 0.3 | | |
| Deteriorated | | | | | | | | | | |  | | | 1 (1.3%) | | | | | | 1 (14%) | | | | | | |  | | |
| Improved | | | | | | | | | | |  | | | 74 (96%) | | | | | | 6 (86%) | | | | | | |  | | |
| Unchanged | | | | | | | | | | |  | | | 2 (2.6%) | | | | | | 0 (0%) | | | | | | |  | | |
| **12 followup\_done** | | | | | | | | | | | 212 | | | 119 (63%) | | | | | | 11 (46%) | | | | | | | 0.10 | | |
| **12 followup\_patientstatus** | | | | | | | | | | | 158 | | |  | | | | | |  | | | | | | | 0.8 | | |
| Alive | | | | | | | | | | |  | | | 109 (76%) | | | | | | 11 (73%) | | | | | | |  | | |
| Deceased --> EXIT form | | | | | | | | | | |  | | | 34 (24%) | | | | | | 4 (27%) | | | | | | |  | | |
| **12 followup\_patientcondition** | | | | | | | | | | | 119 | | |  | | | | | |  | | | | | | | 0.3 | | |
| Deteriorated | | | | | | | | | | |  | | | 2 (1.8%) | | | | | | 1 (10%) | | | | | | |  | | |
| Improved | | | | | | | | | | |  | | | 100 (92%) | | | | | | 9 (90%) | | | | | | |  | | |
| Unchanged | | | | | | | | | | |  | | | 7 (6.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| **If deceased, cause of death** | | | | | | | | | | | 76 | | |  | | | | | |  | | | | | | | 0.2 | | |
| + MDR | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Acute gastroenteritis hypocalemia | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Acute kidney injury | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Cancer | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Cancer (According to the wife) | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Chronic diarrhea | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Chronic kidney disease, stage 5 | | | | | | | | | | |  | | | 0 (0%) | | | | | | 1 (17%) | | | | | | |  | | |
| COPD | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Cryptococcal meningitis | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Diss. TB | | | | | | | | | | |  | | | 3 (4.3%) | | | | | | 0 (0%) | | | | | | |  | | |
| Diss/TB | | | | | | | | | | |  | | | 2 (2.9%) | | | | | | 0 (0%) | | | | | | |  | | |
| Double Pneumonia | | | | | | | | | | |  | | | 0 (0%) | | | | | | 1 (17%) | | | | | | |  | | |
| Drug induced liver injury (DILI) | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Drug induced pancreatitis | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Female pelvic inflammatory disease, unspecified | | | | | | | | | | |  | | | 0 (0%) | | | | | | 0 (0%) | | | | | | |  | | |
| Gastroenteritis | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Head Trauma | | | | | | | | | | |  | | | 0 (0%) | | | | | | 0 (0%) | | | | | | |  | | |
| Hepatitis B | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| HIV | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| HIV-Encephalous | | | | | | | | | | |  | | | 0 (0%) | | | | | | 0 (0%) | | | | | | |  | | |
| Interstitial pulmonary disease | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Jaundice | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Kaposi Sarcoma | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Kidney failure | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Kidney failure and PTB | | | | | | | | | | |  | | | 0 (0%) | | | | | | 0 (0%) | | | | | | |  | | |
| Liver failure | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| LRTI/RVD | | | | | | | | | | |  | | | 0 (0%) | | | | | | 0 (0%) | | | | | | |  | | |
| Lymphoid. Haematopoietic related tissue | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Lymphoma | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| MDR | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| MDR Chronic Diarrhoea | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| MDR TB | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Meningitis | | | | | | | | | | |  | | | 0 (0%) | | | | | | 1 (17%) | | | | | | |  | | |
| Meningitis / MDR TB | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Natural causes | | | | | | | | | | |  | | | 7 (10%) | | | | | | 0 (0%) | | | | | | |  | | |
| No diagnosis | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Oesophageal Conditis | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Pancytopenia and TB | | | | | | | | | | |  | | | 0 (0%) | | | | | | 0 (0%) | | | | | | |  | | |
| Pneumonia | | | | | | | | | | |  | | | 2 (2.9%) | | | | | | 0 (0%) | | | | | | |  | | |
| PTB | | | | | | | | | | |  | | | 6 (8.6%) | | | | | | 0 (0%) | | | | | | |  | | |
| PTB/Diss. TB | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Pulmonary TB | | | | | | | | | | |  | | | 3 (4.3%) | | | | | | 0 (0%) | | | | | | |  | | |
| Renal failure | | | | | | | | | | |  | | | 2 (2.9%) | | | | | | 0 (0%) | | | | | | |  | | |
| Renal Failure | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Respiratory Pneumonia | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Seizures | | | | | | | | | | |  | | | 0 (0%) | | | | | | 1 (17%) | | | | | | |  | | |
| Sepsis | | | | | | | | | | |  | | | 0 (0%) | | | | | | 0 (0%) | | | | | | |  | | |
| Sepsis TB | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Sepsis/TBM | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Sepsis? Had boil in neck | | | | | | | | | | |  | | | 0 (0%) | | | | | | 1 (17%) | | | | | | |  | | |
| Septicemia | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| TB | | | | | | | | | | |  | | | 0 (0%) | | | | | | 0 (0%) | | | | | | |  | | |
| TB and heart failure | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| TB and Meningitis | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| TB Default | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| TB intestines | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| TB Meningitis | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| TB/Ascites | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Tuberculosis | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| unknown | | | | | | | | | | |  | | | 1 (1.4%) | | | | | | 0 (0%) | | | | | | |  | | |
| Unknown | | | | | | | | | | |  | | | 5 (7.1%) | | | | | | 1 (17%) | | | | | | |  | | |
| 1n (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Pearson's Chi-squared test; Fisher's exact test | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

# Table 4 (Mortality): Predictors of recurrent admission, mortality, including basal cortisol, stimulated cortisol, incremental cortisol

| Variable | N | 0, N = 3781 | 1, N = 531 | p-value2 |
| --- | --- | --- | --- | --- |
| **Ethnicity** | 428 |  |  | 0.3 |
| Asian |  | 1 (0.3%) | 0 (0%) |  |
| Black African |  | 312 (83%) | 45 (85%) |  |
| Coloured |  | 61 (16%) | 7 (13%) |  |
| White |  | 1 (0.3%) | 1 (1.9%) |  |
| **Gender** | 429 |  |  | 0.4 |
| Female |  | 188 (50%) | 30 (57%) |  |
| Male |  | 188 (50%) | 23 (43%) |  |
| **Total CD4 count** | 428 | 39 (29) | 34 (27) | 0.2 |
| **Random cortisol result** | 381 | 488 (176) | 490 (199) | 0.8 |
| **Synacthen: 30 minute cortisol result** | 145 | 693 (231) | 695 (235) | 0.8 |
| **Synacthen: 0 minute cortisol result** | 148 | 446 (194) | 508 (231) | 0.2 |
| **ACTH result** | 381 | 39 (30) | 55 (71) | 0.088 |
| **Neutrophils** | 93 | 28 (116) | 8 (22) | 0.13 |
| **Lymphocyte count** | 93 | 4.3 (7.6) | 1.1 (1.5) | 0.5 |
| **Haemoglobin** | 426 | 10.76 (36.06) | 9.03 (2.34) | >0.9 |
| 1n (%); Mean (SD) | | | | |
| 2Fisher's exact test; Pearson's Chi-squared test; Wilcoxon rank sum test | | | | |

# Table 4 (Mortality): Predictors of recurrent admission, mortality, including basal cortisol, stimulated cortisol, incremental cortisol - continued

| Variable | N | 0, N = 3781 | 1, N = 531 | p-value2 |
| --- | --- | --- | --- | --- |
| **Sodium** | 408 | 133.9 (6.6) | 133.4 (6.0) | 0.7 |
| **Hypoglycaemia** | 408 | 8 (2.2%) | 1 (2.0%) | >0.9 |
| **BP (systolic)** | 428 | 115 (18) | 112 (14) | 0.6 |
| **BP (diastolic)** | 428 | 69 (13) | 71 (9) | 0.059 |
| **Current tuberculosis** | 415 | 316 (87%) | 43 (84%) | 0.6 |
| **Duration of current illness** | 400 | 30 (96) | 22 (23) | 0.8 |
| **HIV\_duration** | 350 | 1,434 (1,957) | 1,638 (2,004) | 0.5 |
| **n\_primary\_med\_conditions** | 428 |  |  | 0.2 |
| 3 |  | 46 (12%) | 12 (23%) |  |
| 2 |  | 86 (23%) | 12 (23%) |  |
| 1 |  | 225 (60%) | 26 (49%) |  |
| 4 |  | 16 (4.3%) | 3 (5.7%) |  |
| 5 |  | 2 (0.5%) | 0 (0%) |  |
| **n\_Coexisting\_medical\_conditions** | 302 |  |  | 0.001 |
| 2 |  | 86 (33%) | 10 (24%) |  |
| 1 |  | 111 (43%) | 9 (22%) |  |
| 4 |  | 17 (6.5%) | 10 (24%) |  |
| 3 |  | 43 (16%) | 11 (27%) |  |
| 5 |  | 4 (1.5%) | 1 (2.4%) |  |
| **addisons\_disease\_advanced\_HIV** | 321 | 24 (8.8%) | 5 (11%) | 0.6 |
| 1Mean (SD); n (%) | | | | |
| 2Wilcoxon rank sum test; Fisher's exact test; Pearson's Chi-squared test | | | | |

# Table 6: Multivariate logistical regression analysis, examining the variables independently predictive of a poor outcome

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Estimate | CI.lower | CI.upper |
| Addison's disease advanced HIV | 1.106583 | 0.401098 | 3.052933 |
| Lymphocyte count | 0.840968 | 0.744747 | 0.94962 |
| BP diastolic | 1.01156 | 0.989078 | 1.034552 |