**Figures and Tables**

**Registered cases between   
July 2007 and March 2017**

**n = 10,203**

Not met criteria of Ring&Messmer

N = 788

**Cases with severity grade ≥ II according to   
Ring&Messmer**

**n = 9,415**

**children&adolescent**

**n = 2,524 (27%)**

**adults ≥18 years**

**n = 6,891 (73%)**

**Elderly**

**≥65 y**

**n = 1165 (12%)**

**Adults**

**41-64 y**

**n = 3611 (37%)**

**Young adults**

**18-40 y**

**n = 2360 (24%)**

**Figure 1: Flow chart of study cohort**

**@Wojciech:**

**Die folgenden Tabellen und Abbildungen sind noch mit den Vorjahres-Datensatz berechnet. Alles müsste mit den >10.000 Fällen berechnet werden.**

**Aber Achtung ich nehme nur die Fälle mit Ring&Messmer ≥ grad II und auch nur aus den Ländern, die >100 Fälle gemeldet haben (Germany, Austria, Switzerland, Greece, Poland, Spain, France, Bulgaria, Italy, Ireland).**

**In der Exceltabelle im Anhang habe ich schon mit den neuen Zahlen begonnen.**

**Ich kann allerdings die Korrektur für Multiples Testen in SPSS nicht.**

**Ich würde auch immer gern wissen, zwischen welchen Gruppen genau ein Unterschied besteht, wenn der Chi² test signifikant ist.**

**Table 1: Baseline characteristics.** In total 7.224 cases were analyzable until April 2016, 1623 (22%) were <18 years old and 5.601 (78%) were ≥18 years old.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Young adults** | **Adults** | **Elderly** | **All adults** |  |
|  | **18-40 y**  **n (%)** | **41-64 y**  **n (%)** | **≥ 65 y**  **n (%)** | **≥ 18 y**  **n (%)** | ***Chi² test*** |
| **Total** | **1809 (25)** | **2856 (40)** | **936 (13)** | **5604 (78)** |  |
| Age in years±SD | 30±6.6 | 52±6.8 | 71±4.6 | 48±15.5 |  |
| Female | **1138 (63)** | 1630 (57) | 524 (56) | 3292 (59) | *p<0.001* |
| **Co-morbidities** | | | | |  |
| Atopic disease | **607 (36)** | 681 (25) | 167 (19) | 1455 (28) | *p<0.001* |
| Cardiovascular disease | 75 (4) | **726 (27)** | **538 (60)** | 1339 (25) | *p<0.001* |
| Mastocytosis | 27 (2) | **93 (3)** | **37 (4)** | 157 (3) | *p<0.001* |
| Thyroid disease | 112 (7) | 319 (12) | **151 (17)** | 582 (11) | *p<0.001* |
| **Cofactors** | | | | |  |
| involved in general | 785 (58) | 1535 (65) | **651 (76)** | 2971 (53) | *p<0.001* |
| drugs | 95 (13) | 726 (50) | **510 (80)** | 1331 (24) | *p<0.001* |
| Physical exercise | 513 (70) | 778 (55) | 230 (40) | 1521 (27) | *NS* |
| Psychological stress | 138 (18) | 192 (13) | 55 (8) | 385 (7) | *NS* |
| Alcohol | 91 (16) | 127 (11) | 35 (6) | 253 (5) | *NS* |
| Mensis | **49 (23)** | 22 (5) | 0 (0) | 71 (1.3) | *p<0.001* |
| Acute Infection | **75 (10)** | 69 (5) | 22 (3) | 166 (3) | *p=0.001* |
| **Repeated reaction** | | | | |  |
| yes | 534 (33) | 821 (32) | 259 (32) | 1614 (29) | *NS* |

**Table 2: Specific elicitor by age group.**   
The elicitor was not specified in 352 (6%) patients. Rare elicitors are not reported in detail.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Young adults** | **Adults** | **Elderly** | **All adults** |  |
|  | **18-40 y**  **n (%)** | **41-64 y**  **n (%)** | **≥ 65 y**  **n (%)** | **≥ 18 y**  **n (%)** | ***Chi² test*** |
| **Total** | 1809 (25) | 2856 (40) | 936 (13) | 5601 (78) |  |
| Elicitor known | **1198 (66)** | 2134 (75) | 711 (76) | 4043 (72) | *p<0.001* |
| Elicitor suspected | **460 (25)** | 567 (20) | 179 (19) | 1206 (22) | *p<0.001* |
| **Drugs** | 375 (21) | 625 (22) | 227 (24) | 1227 (22) | *NS* |
| analgesics | 144 (38) | 254 (41) | 86 (38) | 484 (39) | *NS* |
| antibiotics | 97 (26) | 137 (22) | 46 (20) | 280 (23) | *NS* |
| Local anesthetics | 38 (10) | 65 (10) | 20 (9) | 123 (10) | *NS* |
| x-ray (contrast agent) | 12 (3) | 31 (5) | 19 (8) | 62 (5) | *NS* |
| PPI | 15 (4) | 14 (2) | 7 (3) | 36 (3) | *NS* |
| Cardiovascular drugs | 1 (0.3) | 5 (0.8) | **7 (3)** | 13 (1.1) | *p=0.005* |
| **Insects** | **756 (42)** | 1672 (59) | 559 (60) | 2987 (53) | *p<0.001* |
| Yellow jacket | 523 (69) | 1248 (75) | 405 (72) | 2176 (73) | *NS* |
| Bee | 179 (24) | 266 (16) | 88 (16) | 533 (18) | *NS* |
| Hornet | 30 (4) | 83 (5) | 37 (7) | 150 (5) | *NS* |
| **Food** | **468 (26)** | 343 (12) | 93 (10) | 904 (16) | *p<0.001* |
| wheat | 76 (16) | 57 (17) | 13 (14) | 146 (16) | *NS* |
| hazelnut | 37 (8) | 28 (8) | **15 (16)** | 80 (9) | *p=0.009* |
| soy | 28 (6) | 41 (12) | 5 (5) | 74 (8) | *NS* |
| celery | 27 (6) | 29 (8) | 7 (8) | 63 (7) | *NS* |
| shellfish | 33 (7) | 23 (7) | 6 (6) | 62 (7) | *NS* |
| peanut | 33 (7) | 13 (4) | 1 (1) | 47 (5) | *NS* |
| **Immunotherapy (SIT)** | 27 (1.5) | 25 (0.9) | 3 (0.3) | 55 (1.0) | *NS* |

**Evtl. So eine Abbildung für unsere 3 Gruppen erstellen? Kannst Du das mit r?**

**Falls möglich bitte so eine Abbildung für ab >18 Jahre erstellen** 

**Figure 3: Symptoms**

Für Husten sehe es z.B. so aus:

|  |  |
| --- | --- |
|  | Cough (in %) |
| adults 18-23 y | 7,4 |
| adults 24-29 y | 5,6 |
| adults 30-35 y | 5,5 |
| adults 36-41 y | 4,9 |
| adults 42-47 y | 3,9 |
| adults 48-53 y | 4 |
| adults 54-59 y | 4,3 |
| adults 60-64 y | 3,2 |
| adults 65-70 y | 4,2 |
| adults 71-76 y | 2,5 |
| seniors 77+ | 1,5 |

**Table 3: First line treatment by professionals depending on severity grade according to Ring&Messmer.**YA – young adults, A – adults, E – Elderly

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | I | | | II | | | III | | | IV | | | Total | | |
|  | YA,  18-40 y | A,  41-64 y | E,  > 65 y | YA,  18-40 y | A,  41-64 y | E,  > 65 y | YA,  18-40 y | A,  41-64 y | E,  > 65 y | YA,  18-40 y | A,  41-64 y | E,  > 65 y | YA,  18-40 y | A, 41-64 y | E,  > 65 y |
|  | n=121 | n=163 | n=57 | n=1138 | n=1603 | n=449 | n=523 | n=997 | n=394 | n=27 | n=93 | n=36 | n=1809 | n=2856 | n=936 |
| First line Treatment | 84 (70)) | 105 (64)) | 34  (60)) | 859 (75)) | 1229 (77)) | 354  (79)) | 397 (76)) | 831 (83)) | 328  (83)) | 25  (93)) | 86  (92)) | 35  (97)) | 1501 (83)) | 2429 (85)) | 792  (84)) |
| Epinephrine | 2  (4)) | 4  (6)) | 0 | 81  (14)) | 113 (14)) | 46 (19)) | 55 (19)) | **147 (28))\*** | **51 (26))\*** | 13  (72)) | 41  (64)) | 19  (79)) | 151 (16)) | 305 (21)) | **116 (24))\*\*\*** |
| Corticosteroids | 49 (88)) | 63 (88)) | 19 (79)) | 528 (89)) | 719 (91)) | 209 (87)) | 248 (87)) | 476 (92)) | 182 (94)) | 15  (83)) | 52 (81)) | 18  (75)) | 840 (88)) | 1310 (90)) | 428 (89)) |
| Antihistamines | 45 (80)) | 57 (79)) | 21 (88)) | 495 (83)) | 655 (83)) | 189 (79)) | 240 (85)) | 430 (83)) | 166 (86)) | 12  (67)) | 45  (70)) | 18  (75)) | 792 (83)) | 1187 (82)) | 294 (82)) |
| Admitted to hospital | 21 (40)) | 20 (28)) | 7 (30)) | 193 (48)) | 226 (14)) | 81 (53)) | 97 (55)) | 203 (66)) | 77 (70)) | 6  (67)) | 232 (91)) | 13  (93)) | 317 (50)) | 481 (52)) | **178 (59))\*** |
| Intensive Care Unit | 4  (7)) | 3  (4)) | 0 | 28  (7)) | 50 (10)) | 17 (11)) | 27 (16)) | 61 (21)) | 25 (24)) | 4  (44)) | **29 (94))\*\*\*** | **13 (93))\*\*\*** | 63 (10)) | 143 (16)) | **55 (19))\*\*\*** |
| Chi² test; p-values calculated for the 3 patient groups in the same severity grade, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001 | | | | | | | | | | | | | | | |

Tabelle belassen, angelehnt an das Kindermanuscript, inkl. EU Daten (n=12); **das mache ich**

Tab 4: Fatal reactions (n=7) in order of increasing age. All grade IV according to Ring and Messmer serverity grading

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year of reaction** | **Age** | **Sex** | **Elicitor** | **Repeated reaction** | **Interval** | **Co-Factors** | **Codisease** | **Therapy** | **2nd dose adrenalin** |
| 2010 | 81 | F | Analgesics (metamizole) | Yes | n.a. | stress | maligne disease | Clinic, adrenalin i.v., corticosteroid i.v., AH i.v., O2, volume | unknown |
| 2016 | 53 | M | Bee | Yes | n.a. | Exercise (moderate) | asthma | Lay person +emergency doctor, AAI, adrenalin i.m., AH i.v., corticosteroid i.v., volume | yes |
| 2014 | 50 | M | Bee | unknown | n.a. | Exercise (mild),  concomitant drugs unknown | CVD | No treatment | no |
| 2012 | 49 | M | Yellow jacket | Yes | 0-10 min | Exercise (mild) | mastocytosis | Lay person +emergency doctor, AAI, adrenalin i.v., other drugs not specified, reanimation | yes |
| 2010 | 47 | M | Yellow jacket | No | n.a. |  |  | Emergency doctor, adrenalin i.v., AH i.v., corticosteroid i.v., O2,volume, reanimation | unknown |
| 2007 | 44 | M | Yellow jacket | Yes | n.a. | stress | mastocytosis | Clinic, adrenalin i.v., AH i.v., corticosteroid i.v., volume, reanimation | unknown |
| 2014 | 35 | F | Analgesics (metamizole) | unknown | 11-30 min | thyroxin | asthma, thyroid disease | Clinic, adrenalin i.v., corticosteroid i.v., O2 | yes |