

P1325**Pronounced Effect of Intensified Intervention on Important Risk Factors in Patients with Type 2 Diabetes during Regular Out-Patient Control**

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The effect of intensified intervention during one year on important risk factors was studied in patients with type 2 diabetes. They were controlled as ordinary out-patients at a medical hospital and at a primary care unit. The aim was to increase the number of patients reaching specified goals of therapy: LDL < 3,0 mmol/l, Blood pressure (BP) < 140/95, HbA1c < 6,5%, regular measuring of microalbuminuria. The patients were included consecutively in random order during regular out-patient visits. The doctors and nurses in the units initially went through an education program and then followed the patients. 212 patients aged 35-75 years were followed. LDL was < 3,0 in 29% of the patients at inclusion, this increased to 72% after one year ($p < 0,001$). This was achieved by increased treatment with statins (29% before and 63% after one year). BP was < 140/85 in 48% before entry, this increased to 69% after one year ($p < 0,001$). 59% had antihypertensive treatment before and 74% after one year. Of these 28% had at least three different agents. HbA1c was < 6,5% in 54% of the patients from the beginning, this increased to 62% at one year (ns). Microalbuminuria was measured in 47% of the patients before and 97% after one year ($p < 0,001$). In conclusion, increased attention to and knowledge of the importance of focusing on risk factors by an education program can give substantial better results also in ordinary out-patient units.

P1326**Diabetic Hyperosmolar Non-Ketotic Coma, a Different Approach to Fluid Replacement**

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Diabetic hyperglycemic nonketotic coma (HONK) is a commonly encountered acute complication of type 2 elderly diabetics. Fluid requirements of these diabetics are corrected with half strength normal saline, because of -serum Na⁺ level.

Fluid replacement need extreme care because of their compromised cardiac and renal function. The requirement is usually about 6 - 8 liters or more, depending upon the degree of dehydration and unlike diabetic ketoacidosis, needs correction slowly taking about 24 or more hour. In our country, half strength normal saline is not available commercially. Giving normal saline we can treat them, because after dilution of body fluid, patient's hyponatremia usually gets corrected. If we do not use normal saline, we are to dilute it by distilled water, and can contaminate the fluid with pyrogen causing hyperpyrexia. So a plan was taken to treat these patients, who does not vomit nor has nausea, by giving tap water, (boiled and cold) through the nasogastric tube (NGT).

During January 1999 to January 2000 seven (M=5 and F=2) patients of HONK were admitted in our unit. None had nausea or vomiting. These patients' fluid deficits were corrected by nasogastric water in drip method, like they were scheduled to be corrected intravenously. Total fluid requirement was between 5 to 6 liters and time required 24 to 36 hours. None had evidence of fluid overload or hyperpyrexia. Bio-chemical abnormalities were checked after 24, 36 and 72 hours, which recorded significant improvement of the abnormalities. Patients improved clinically, none had relapse of symptoms. Fluid requirement were about 6-8 liters. Normal saline (0.9% NaCl) is avoided and half strength normal saline prepared by diluting with distilled water. The procedure requires large amount of distilled water and wastage of normal saline. To curtail the wastage and to reduce the treatment cost, we gave the above trial to seven patients and found it useful. None had untoward effect. The bio-chemical abnormalities were compared, and found significant improvement of the abnormalities.

In absence of half strength normal saline, plain water can be given safely to treat these patients through the NGT, who has no nausea or vomiting and who can tolerate it.

P1327**Diabetes and Shoulder Joint Pain, Treatment with Intra-Articular Steroid**

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Adhesive capsulitis is self-limiting disease, few patients will get spontaneous resolution while suffering from pain and progressive loss of motion of the joints for prolonged period; even few may not recover. Like those in nondiabetics, our aim was to modify the course of the disease in diabetics, to shorten their recovery time by early intervention.

Between June/'91 to November/'99, 960 (M= 600, F=360) diabetic patients reported to us with adhesive capsulitis. Duration of their diabetes was 5-18 and mean age 52 ± 5 years respectively. Increased incidence of adhesive capsulitis was noticed among patients who suffered from diabetes for duration between 9-15 years. Of the total number, 650 patients (M= 430, F= 220) were selected for intra-articular steroid injection and the remaining 310 (M=206, F=104) were treated with physical therapy and NSAIDs. Their blood glucose was controlled either with oral hypoglycaemic agents or insulin, X-ray of the shoulder joints were done in all the patients in the series to exclude possible other organic bone or joint disease. Through anterior approach a long needle with disposable syringe was used. Methyl prednisolone acetate 40 mg and Triamcinolone acetate 40 mg were used in two groups.

Responses to intra-articular steroid injection were mainly noticed between 2nd and 3rd injections, which were given at intervals of two weeks. Fourteen patients did not show any response. Injections were given to both joints on same day in patients with bilateral joint involvement. There was no response difference between the sexes. None had complication related to intra-articular steroid injections. In our large series of 650 diabetic patient recovery from symptoms was significant ($p < 0,001$) after 2nd and 3rd injections, may be due to secretion of lubricating surfactant. None had side effects. Recommendation is that intra-articular steroid may be given to diabetic patients with adhesive capsulitis after proper glycaemic control. Response to steroid is good if given during the early stages of symptoms of adhesive capsulitis. Appropriate precaution can prevent complication.

P1328**Three Cases of Abnormal Rise in Glycated Haemoglobin**

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Blood glucose concentration in a diabetic patient fluctuates widely in relation to food, physical activity and anti diabetic treatment. Traditional measurement does not reflect what happens over longer periods. Single measurements can be manipulated by the patients. Glycated hemoglobin provides objective information about retrospective Glycemia not available by any other means. GHB is independent of ambient glucose concentration, time of the day, diet exercise and anti diabetic treatment and cannot be manipulated by the patient. GHB correlates well with long term complications of diabetes (DCCT, UKPDS, WISCONSIN and KUMAMOTO.)

We report three cases of abnormal high values of GHB about 25% in diabetic patients who were under good control. 45 year old DM 5 years- Admitted for Diabetic foot- On OHA - Good control. No Micro or Macro vascular complication HbA1c was 21.5% -Bio rad microcolumn test. 2nd case a post -splenectomy patient, diabetic good control the HbA1c was 15%. Hemoglobin Electrophoresis was done and result was stunning Hb A -72.5%-normal 96.0 to 98.0.