Abstracts From the Journals of the East

Methimazole-Induced Agranulocytosis Treated with Recombinant Human Granulocyte Colony-Stimulating
Factor (rhg-CSF): A Case Report. Chien, M.N., Wang, CIL, Tsan, KW. Chin.Med.J. (Taipei), 1995;56:351-355.

The case of a 55 year old woman diagnosed as relapsed hyperthyroidism and treated with methimazole 5 mg thrice daily and developing agranulocytosis is presented. The patient had a past history of partial thyroidectomy due to anoveractive thyroid. She developed palpitations and fatigue. Physical examination showed a mildly enlarged thyroid gland with moderately raised values of the thyroid hormone levels and a nonnal blood count. Anti-thyroid therapy was started with methimazole 5 mgthrice daily. Six weeks later the drug had to be discontinued due to a fall in the leucocyte count (1600/mm3).Two weeks after stopping methimazole the patient developed chills, fever and a sore throat. The tonsils were found enlarged and congested and the blood picture showed a haernoglobin level of 11.2 G/L, leucocyte count of 1100/mm3 and 23% granulocytes, 76% of lymphocytes and 1% monocytes. All other biochemical tests and a chest Xray were normal. Antibiotics and supportive measures were instituted. In the next six days the leucocyte count further reduced to 700 mm3 with 9% granulocytes, 90% lymphocytes and 1% monocytes. Therapy with rhG-CSF (75ug/d, subcutaneously for 6 days) was administered. The granulocytes increased and fever subsided with resolution of the tonsillar infection after a week. On discharge from hospital the patient had a leucocyte count of 6800/mm3 with 72% granulocytes, 26% lymphocytes and 1% monocytes. The anti-thyroid therapy was changed to 8mCi of 1311 giving good results.

Agranulocytosis is a deleterious and lethal adverse effect of methimazole therapy, primarily used to treat Graves Disease. It occurs in 0.3-0.5% of patients usually in the first three months. No predictive factor has been identified to predetermine which patient would develop this blood dyscrasia. The medication has to be discontinued and antibiotics administered to combat the infection. Steroids may be used though their role is not established. They inhibit conversion of T4 to T3 and stimulate the bone marrow.

Colony stimulating factors have been tried in drug induced agranulocytosis. Recombinant human granulocyte colony stimulating factor (rhG-CSF) is a potent factor for granulopoietic growth. It has been used in cases of leukopenia secondary to chemotherapy AIDS, radiation induced myelosuppression and hairy cell leukaernia. Inmethimazole induced agranulocytosis it significantly reduces the recovery period and provides a good response with no toxic side effects.

Ewing's Sarcoma of the Temporal Bone. Ahmed, K., Shaha, S.K., Mahmood, M.H.S., Alauddin, M. Bangladesh Med.J., 1995;24:23-24.

The case of a 10 years old boy diagnosed as Ewing's Sarcoma of the right temporal bone is presented. The child came in with a painful right mastoid swelling and right aural discharge since 2 months. There was a soft fluctuant tender post auricular swelling and a fleshy mass in the deep meatus which bled on touch. Conductive deafness of 60 DB loss was present on the right side and the Xray of the mastoid showed a soft tissue shadow with bony erosions. All other investigations were in the normal range. Radical mastoidectomy was perfonned and the tissue subjected to histopathology. The examination revealed small round packed cells with large nuclei surrounded by scanty cytoplasm. Mitotic figures were seen occasionally. The tumour was vascular with haemorrhage and necrosis. Ewing's Sarcoma was diagnosed on these findings.

Only 30 cases of Ewing's Sarcoma of the skull bones have been reported in literature. The age range is between 5 and 25 years with a male preponderance. Diagnosis is made by histopathological

examination.
The prognosis of Ewing's Sarcoma is not very promising due to early subclinical metastasis, Treatment undertaken is a combination of surgery, radiotherapy and chemotherapy. In the presented case chemotherapy was refused by the patient.

Factors Influencing Blood Transfusion in Patients undergoing Transu reth rat Resection of Prostate (TURP). Akhtar, N., Mannan, A. Specialist, Pak.J.Med.Sci., 1995;12: 15-18.

A prospective study was conducted on 100 consecutive patients with benign prostatic hyperplasia (BPH) undergoing TURP to identify the need for blood transfusion and factors influencing it. All the patients had a physical examination, blood chemistry, Xray chest, ECG and ultrasound scan of the kidneys and bladder. Surgery was performed by the consultant surgeons. Bladder irrigation was done with 0.9% saline solution post-operatively.

Two units of blood were prepared after cross-matching for each patient according to the policy of the department. The criteria for transfusing blood were pre-operative haemoglobin less than 11G, prostate size more than 50Gm and systolic blood pressure less than 100mmHg.

The mean age of the patients studied was 65.9 years, mean Hb 12G, weight of resected tissue 12.9G, resection time 37.4 minutes, mean volume of irrigants 15.5 litres and intrayenous fluids 1.4 litres. The mean amount of blood transfused was 0.47 pints. Three subjects developed clot retention and 29 had post-operative infection.

Of the 100 patients studied, 37 received blood transfusion of which 10 required 2 units of blood each. Of the 200 pints of blood arranged, only 47 units were used. No statistically significant factor including resection time (mean was 2.9 min/Gm) and resected tissue weight could be identified as the cause fot the high transfusion rate. Ready availability of blood was the only reascrn attributed to the use of blood perhaps earlier than required. Though transfusion services are not well developed locally, the criteria for blood transfusion should be revised due to the prevailing hazards of hepatitis and AIDS.

Hyperlipidaemia in a Treated Group of Hypertensivcs:
A General Profile. Bano, K.A., Akram, S., Malik, it, Saleem, M., Hussain, it Pak.J.Med.Res., 1995;34: 156.

A retrospective study was conducted on 100 patients with essential hypertension, uncomplicated at initial registration at the Hypertension Clinic of Sir Ganga Ram Hospital, Lahore. The presence of metabolic and cardiovascular disorders was observed. The mean period of follow-up was 11 years.

The patients were examined physically. Laboratory tests included a lipid profile, blood glucose, serum urea, creatinine and electrolytes. Hyperlipidaeniia was diagnosed if serumtnglycende levels exceeded 200mg and serum cholesterol was more than 250mg/di. Hyperlilidaemia was discovered in 44 patients (16 males and 41 females). Moderate exercise was performed by 31.8% of the subjects, 16% were smokers, family history of hypertension was present in 41%, cardiovascular disease in 34% and diabetes mellitus in 18% cases. Severe hypertension was found in 6.8% of the hyperlipidaemic individuals. Significantly higher values of serum triglycerides and cholesterol were obsçrved in hyperlipidaemic hypertensives compared to the non-hyperlipidaemics. Cardiovascular complications encountered were in 50% of the hyperlipidaemic hypertensivesand 41% in the non-hyperlipidaemic hypertensives. Six subjects of the former group had diabetes mellitus and obesity. The drugs used included diuretics for a mean of 8.27 years, beta lockers for 6.84 years and other anti-hypertensive agents for 8.12 years. A higher percentage of hyperlipidaemic hypertensives were on beta blockers. The comparison of different parameters in the two groups of patients could not indicate a significant predicting factor for the development of complications in hypertensive subjects.. Smoking was found to be more frequent in the hyperlipidaemics. The variation in the treatment factors can suggest that pharmacological agents lowering blood pressure can also produce metabolic effects.

The study concluded that a large number of hypertensive patients develop hyperlipidaemia and cardiovascular complications. These can be prevented by regular monitoring of lipid levels, cardiovascular status and careful choice of anti-hypertensive drugs.