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Multiple Myeloma at the University Teaching Hospital, Lusaka: A Retrospective Study.

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SUMMARY

A retrospective study of the clinical and laboratory findings in sixteen cases of multiple myeloma seen at the University Teaching Hospital, Lusaka between March 1972 and July 1976 was carried out. The majority of cases presented in the fourth and fifth decade of life. The commonest presenting symptom was bone pain and bone tenderness was the commonest physical finding. The majority of patients were anaemic and hypoalbuminaemic. Bence Jones

protein was detected in only one case.

INTRODUCTION

The incidence of myeloma has increased in recent years and mortality statistics now show incidence figures in the range of 2 to 3 per 100,000 (Martin 1961). The reports on its incidence in Africa varies from one region to another. The disease is rare in Nigeria (Edington and Maclean, 1965, Iyun and Isaacs Sodeye, (1976) whereas in South Africa it is reported to occur just as commonly among the blacks as the whites (Oettle 1963). Myelomatosis would appear to be more common in Jamaica, the population of which is predominantly of African origin, the American Blacks, the white American and in Western Europe than in tropical Africa (Talerman, 1969).

A retrospective study of the clinical and laboratory findings in cases of multiple myeloma presenting at the University Teaching Hospital was carried out and a comparison of some of the findings with other series was undertaken.

Clinical Features. Of the 16 patients, seven were males and nine females. The mean age for the males was 51 years (range 37–66) and for the females 46 years (range 30–62). The majority of patients presented in the fourth and fifth decades of life. The presenting symptoms and most prominent physical findings are presented in Tables I and II respectively.

Table I Presenting Symptoms

Table II Physical Findings.

The haematological findings are shown in Table III.

Table III Haematological Findings.

Thirteen of the sixteen patients were anaemic and the erythrocyte sedimentation rate was raised in all thirteen cases in which the test was performed.

The biochemical findings are presented in Table IV.

Table IV Biochemical Findings.

The urea was more than 40mgs/100ml in 5 cases. Hyperuricaemia was present in six cases and a serum calcium greater than 5.5mEq/litre was present in 4 cases (Table IV). One patient had a persistently raised serum acid phosphatase (over 200 K.A. units per 100ml on 3 occasions). A bone biopsy was carried out in this case and the findings were consistent with multiple myeloma. However, a concurrent carcinoma of the prostate could not be ruled out.

Diagnostic Criteria: Thirteen of the sixteen patients showed radiological evidence of myeloma deposits in bone. The most frequently involved bones were the skull (13 cases) spine (4 cases) and ribs (4 cases). As has been pointed out previously, the bone marrow showed infiltration by meloma cells in all the cases. A paraprotein was present in fourteen of the sixteen

TABLE I

Bone Pain	8
Anaemia	3
Chest infection	1
Pathological Fracture	1
Compression Paraplegia	1
Abdominal Distension	1
Swelling of gums	1

TABLE II

Bone tenderness	6
Splenomegaly	2
Hepatomegaly	2
Axillary Lymphadenopathy	1
Swelling of gum	1
Swelling of clavicle	1

TABLE III

Haemoglobin GMS/100 ml	16 cases
Range 4.0 – 14.2	Mean 8.2
ESR (Westergren) mm/hour	13 cases
Range 70–170	Mean 121

TABLE IV

Urea mgs/100 ml	15 cases
Range 16–245	Mean 49
Uric acid mgs/100 ml	9 cases
Range 3.6 – 18.7	Mean 8.7
Calcium mEq/litre	14 cases
Range 3.6 – 7.2	Mean 5

cases. At least two of these three major criteria of multiple myeloma were present in all patients.

The mean serum total protein in the 16 cases was 10.2 gms/100ml (Range 5.3–17gms) and was raised in 11 of the cases (greater than 9.0 gms) due mainly to the paraprotein. Hypoalbuminaemia (less than 3.0gms per 100ml) was present in 11 cases. Five of the paraproteins were typed and were found to be IgG. To determine whether Bence Jones protein was present in the urine, the heat test was employed in all the cases and electrophoresis of the urine in only a

few instances. It was detected in only one of 14 cases.

DISCUSSION

This series shows that multiple myeloma is not an uncommon haematological malignancy encountered at the University Teaching Hospital. Wright (1973) reporting from Uganda found a lower incidence of multiple myeloma as compared with England and Wales. He felt that this lower incidence was almost certainly due to under-diagnosis or under-reporting. This small study would support his view. Most of the cases recorded in the Lusaka Cancer Registry in 1971 and 1972 came from areas, where the medical facilities were good. Until these facilities are improved in the district hospitals in Zambia, I believe the true incidence of the tumour will not be known.

The finding of an almost equal incidence of myeloma in males and females in this study is similar to other recent series (Martin 1961) and unlike earlier series, where the preponderance of males to females was 3:1.

The majority of the cases presented in the fourth and fifth decade of life. The mean age in this study is younger than that in a series of white patients in South Africa (females 46 as compared to 64 and males 51 as compared to 58). Iyun and Isaacs Sodeye (1976) in a review of cases seen in Ibadan Nigeria found that the disease occurs at a younger age than in other series but wondered whether this might be a reflection of the shorter life expectancy of the Nigerian.

In the first M.R.C. myelometosis trial (M.R.C. Working Party, 1971) it was shown that the blood urea concentration, the Haemoglobin and serum albumin were independently correlated with survival. Most of the patients in the present study were moderately or severely anaemic and hypoalbuminaemic and almost a third had a raised blood urea. As the majority of the patients however were lost to follow up, it is not possible to correlate the laboratory findings with the ultimate prognosis of the patient. The prognostic implications of the laboratory findings and the presence of physical findings on clinical examination in most of the cases in the present study raise the question as to whether the patients presented at a later stage of the disease than those in clinics in Europe and the U.S.A. Hypercalcaemia was present in approximately a quarter of the cases in whom the estimation was carried out and is similar to the findings in other series (Galton, 1972). Hyperuricaemia was frequently present and occurred just as commonly in patients with a raised blood urea as in those whose blood ureas were normal.

There was a surprisingly low incidence of Bence Jones protein even though only a screening test was employed in most cases. Further studies in which electrophoresis of urine samples are carried out, are indicated.

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