



AUDIT of patients referred for DXA scan

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INTRODUCTION:

With a steady increase in life expectancy to 66 years, Indians at risk of osteoporosis is rapidly increasing. Osteoporosis, a silent disease until it is complicated by fractures detected following minimal trauma poses enormous medical, personal burden on aging individuals.

OBJECTIVE:

To evaluate the current use of bone densitometry, referral pattern, age distribution, frequency of testing calcium, vitamin D, and prevalence of osteoporosis in patients referred for DXA scan in a tertiary care Centre.

METHODS:

Bone densitometry data of the 977 patients referred for DXA scan from Aug-2011 to Oct 2012 patients was collected and online review of their biochemical data from computerized CHIPS network was conducted. Patients prescribed glucocorticoids were also noted.

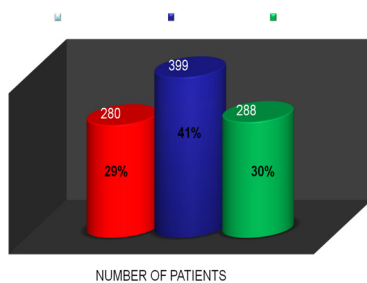
RESULTS

The mean age was 49.98±13.12 (18-89) years, with 47% below 50 years. Overall 29% of the patients had osteoporosis, 41% osteopenia and 30% had normal BMD. In those under age 50 only 13% had osteoporosis and 40% had osteopenia. In those above age 50, 42% had osteoporosis and 44% osteopenia. Calcium profile was evaluated in 65.6% and vitamin D in 75.6% of the patients referred for DXA. The most common referrals were from department of Rheumatology followed by Internal Medicine, Endocrinology and Orthopedics. Steroid use was documented in 25% of the patients and among them 12.5% had osteoporosis, 60% osteopenia and 27.5% normal BMD.

Baseline characteristics	Mean ± Std Deviation	Range
Height	155.01±8.62	130-185
Weight	60.95±12.70	25-116
BMI	25.37±5.14	9.04-48.04
Age	49.98±13.12	18-89
Sex	M 206 F 771	

Biochemical Parameters	Number n=977	Mean ± Std. Deviation	Range
Calcium, PO4, Albumin, Alk PO4	641 (65.6%)	9.06 ± 0.48	7.00-10.60
Vitamin-D	739 (75.6%)	18.61±10.57	4.00-91.00
PTH	38	99.49±84.76	6.80-335.10

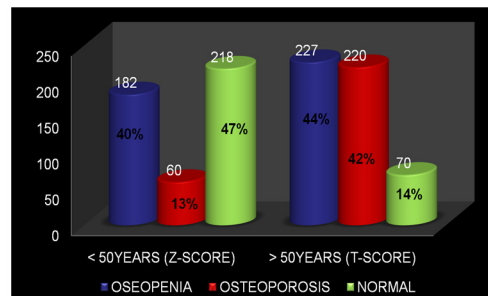
BMD



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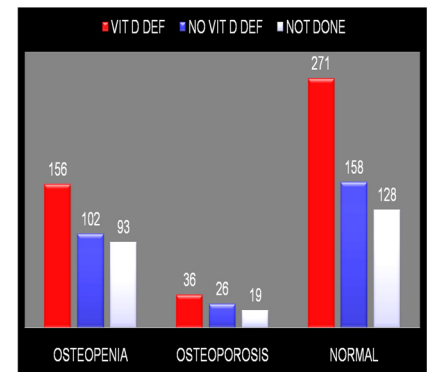
BMD

AGE DISTRIBUTION

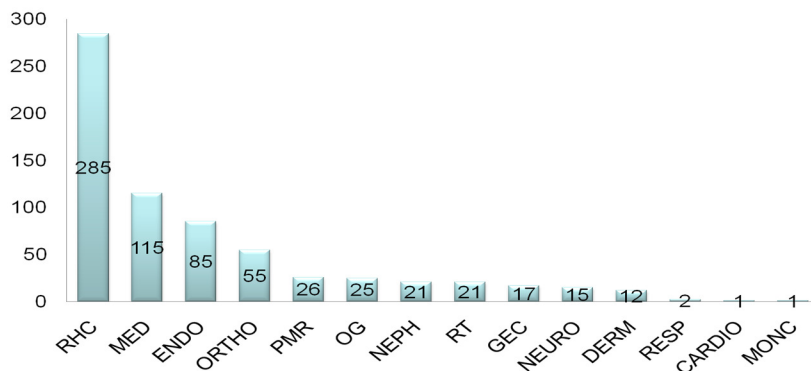


In those under age 50 only 13% had osteoporosis and 40% had osteopenia. In those above age 50, 42% had osteoporosis and 44% osteopenia.

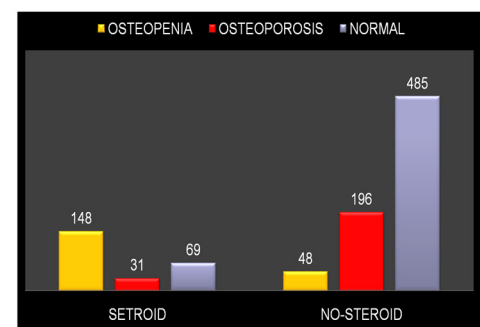
VITAMIN D STATUS



REFERRAL PATTERN - DEPARTMENT WISE



BMD IN STEROID VS NO STEROID



Steroid use was documented in 25% of the patients and among them 12.5% had osteoporosis, 60% osteopenia and 27.5% normal

CONCLUSION:

Utilization of BMD as a tool for osteoporosis is restricted to only few specialties and is lacking among other physicians.

Most common referral for DXA was for post-menopausal state and inflammatory arthritis.

Awareness regarding vitamin D, calcium supplementation, utilization of DXA scan for the large section of undiagnosed aging osteoporotic women and men before the occurrence of fracture, needs to be improved among Health care professionals.