

PREVALANCE OF ANTI-OSTEOPOROTIC TREATMENT (AOT) INITIATION AMONG POST MENOPAUSAL WOMEN WITH NECK OF FEMUR (NOF) FRACTURE IN A DISTRICT HOSPITAL

¹Dinesh M, ¹Fadzlin MZ, ¹Tan CP, ¹Ng JY, ²Tew MM, ³Ashutosh Rao, ^{1,2}Vijaya Kumar SL

¹Department of Orthopaedics, Hospital Sultan Abdul Halim, Sungai Petani, Kedah

²CRC, Hospital Sultan Abdul Halim, Sungai Petani, Kedah

³Department of Orthopaedics, Melaka-Manipal Medical College, Melaka, Malaysia

INTRODUCTION:

NOF fractures, also known as hip fractures, are a common and serious consequence of osteoporosis among post-menopausal women that can lead to significant morbidity, mortality, and reduced quality of life. Initiation of AOT is an important strategy to reduce the risk of further fractures and improve bone density [1]. We present a retrospective study of 142 NOF fractures treated operatively between January 2008 and December 2022.

MATERIALS & METHODS:

The objective is to study the prevalence of AOT initiation among study subjects. Data were collected from hospital orthopedic operation registry. All post-menopausal women with NOF fracture were included. Male, young patients (< 50 years old) with NOF fracture and patients with pathological fractures, poly-trauma or poly-fracture, high energy trauma, severe comorbid and secondary causes of osteoporosis were excluded from the study.

RESULTS:

Median age of patients were 72.5 years. 94.3% of cases were treated by hemi-arthroplasty implants. 13 patients (9.3%) were reported to have a history of fracture. AOT initiated for 90 patients (63.4%), with 95.5% received AOT from standard MOH formulary list. During follow-up, rapid discontinuation of AOT observed at 3, 6 and 12 months at 45.1%, 25.4% and 12% respectively.

Type of AOT Initiated Prior to Current Fracture	n (%)	Type of AOT Initiated Post Current Fracture	n (%)
Alendronate	2 (1.4)	Calcium + Calcitriol	51 (35.9)
Calcium Carbonate	1 (0.7)	Alendronate	35 (24.6)
Calcitriol	4 (2.8)	Romozosumab	2 (1.4)
Not Initiated	135 (95.1)	Denosumab	1 (0.7)
		Teriparatide	1 (0.7)
		Not Initiated	52 (36.6)

Table 1: Type of AOT Initiated Pre and Post NOF Fracture

DISCUSSION:

Despite the clear benefits of AOT, the prevalence of treatment initiation remains low. The numbers vary worldwide with highest reported being 40.3% [2], whereas in Malaysia it has been reported at 36.8% [3]. Discontinuation of AOT is a concerning issue that contributed by several factors such as patient compliance and missed follow-up.

CONCLUSION:

Initiation and maintenance of AOT is important. We, in a district hospital were able to achieve an initiation percentage of 63.4%. More efforts are required to improve awareness of osteoporosis treatment nationwide. Further study is needed to address the alarming rate of discontinuation of AOT.

REFERENCES:

1. Saito, T. et al. Effectiveness of anti-osteoporotic drugs to prevent secondary fragility fractures. *Osteoporos Int* 28, 3289–3300 (2017)
2. Yi. et al. Undertreatment of osteoporosis following hip fracture. *Arch Osteoporos.*2020 11;15(1)
3. Yeap SS. et al. Trends in post osteoporotic hip fracture care from 2010 to 2014 in Malaysia. *Osteoporos Sarcopenia.* 2017 Jun;3(2):112-116

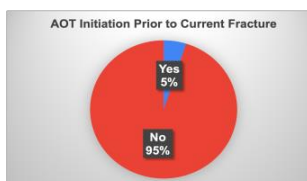


Figure 1: Percentage of AOT initiation prior presentation

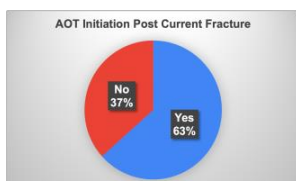


Figure 2: Percentage of AOT initiation post NOF fracture