



Vancouver Spine Surgery Institute, Canada

Introduction

En bloc resection is uncommonly performed in the spine. Available evidence on complication is of low quality.

AIM of this study is **determine Adverse Event (AE) profile** in patients undergoing **Enbloc Resection for primary bone and metastatic tumors of the spine**

Learning Objectives

- To Understand AE profile in Enbloc resection.
- Be aware of risk factors and give significant consideration during preoperative planning.
- Consider the importance of these complex procedures to be done by experienced and specialised teams with Multidisciplinary approach

Methods

Prospective cohort study in a single quaternary care referral center of All consecutive patients who underwent Enbloc resection from January 1, 2009 to July 31, 2017.

AE collected on a standardized form (**Spine AdVerse Events Severity System, version 2 [SAVES V2] forms**) at weekly-dedicated morbidity and mortality rounds.

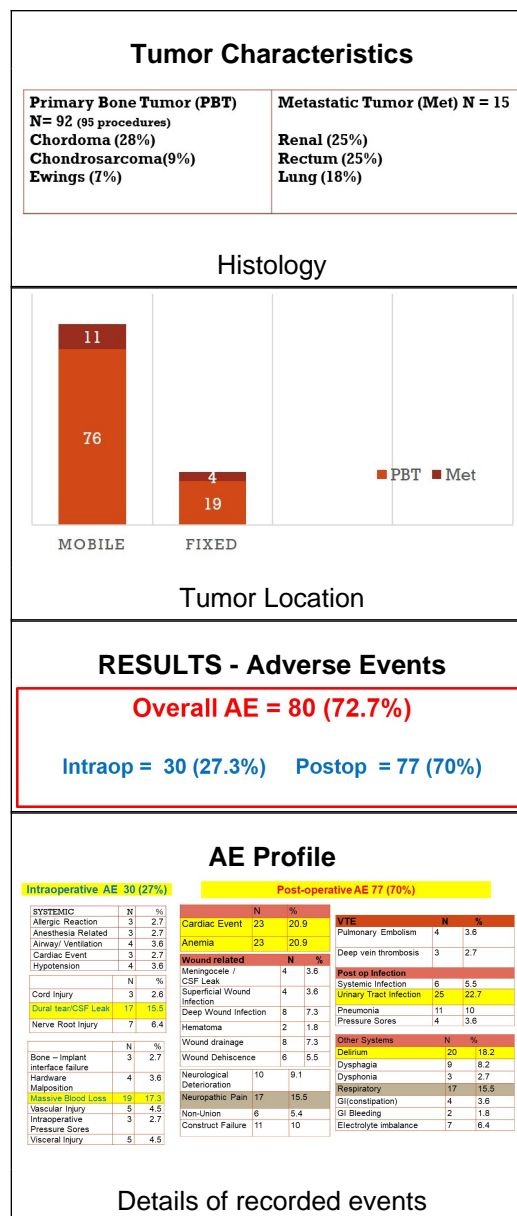
Results

We treated 107 patients (64 female, 40 male, median age 51 years, 110 procedures) with primary bone tumor (92) and metastatic lesions (15)

N = 107 (110 procedures)			
Median Age	51 years (Range 16y – 87y)		
Gender	Male 64 (61%) Female 43 (39%)		
Median follow up	4.58 years (Range 3mo – 8.5 y)		
Neurological impairment (ASIA)	A = 0 D = 17	B = 1 E = 68	C=2 NK 22
Median LOS	17 days		
Mean operative time (hh:mm)	Staged procedure n = 32 17:43 Single stage n = 78 09:15		
30 day Mortality	Nil		
Patient and Episode details			

Results

In the primary tumors, surgical resection was Enneking appropriate (EA) resection in 73% and Enneking inappropriate (EI) in 27% of procedures.



AE SIGNIFICANT ASSOCIATIONS

- Post operative AE **Increased Length of stay** p=0.01
- Higher wound complications** around **fixed spine** p=0.01
Fixed spine (46%) v mobile spine (12%)
- More AE occurrence during staged procedures** (especially wound complications and Intraoperative AE p=0.01)
Staged procedure (78%) v Single procedure (68%)
- Tracheostomy and PEG insertion** required in **Cervical Spine** procedures
Cervical spine (35%) v non Cervical spine (4.4%) p <0.02
- Wound complications** associated with **increased ICU stay** p=0.01

Conclusions

- Enbloc resection is **associated with high incidence of AE**
- Risk factors are Staged Procedure, ICU stay and female gender
- Cervical spine tumors required PEG and Tracheostomy frequently
- Tumors around **fixed spine** had a greater incidence of **wound complicaitions**
- Post op AE occurance increased length of stay