

Introduction

ESWL is one of the options to achieve renal stone clearance with minimal morbidity.

- It is a simple, safe and effective noninvasive procedure.
- Shock waves are passed extracorporeally to reach the focused stone.
- Three forms of energy source.
 1. Electrohydraulic –most common.
 2. Piezoelectric
 3. Electromagnetic
- Focusing done by either fluoroscopy or USG guidance.
- A sitting of ESWL requires a calm patient for 20-30 min taking 600-800 strokes.
- Usually performed in the out patient department without anesthesia.
- MAC with sedation for the procedure increases precision of focus, reduces movements, pain, need for another sitting.

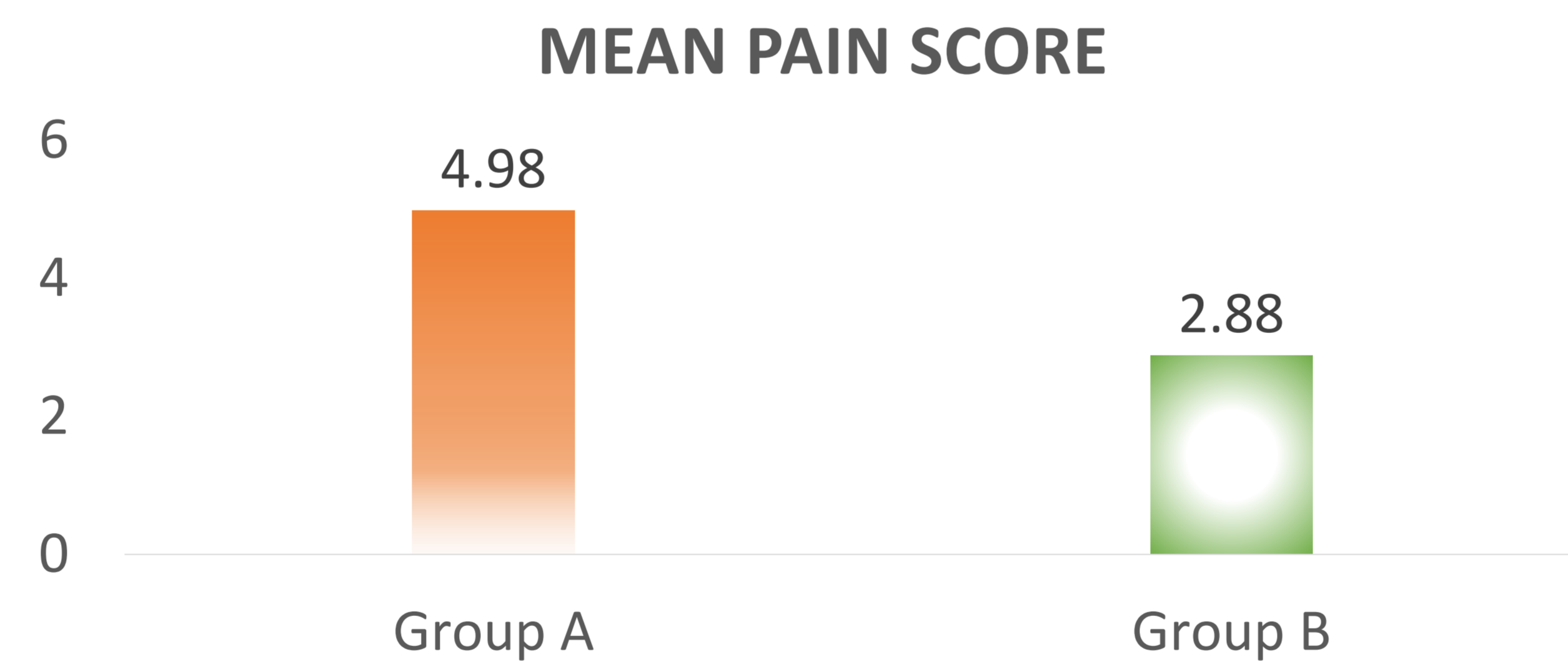
Objectives

We assessed pain during procedure, precision of focus, need for another sitting within 1month. In patients undergoing ESWL with/without anesthesia (MAC with Sedation)

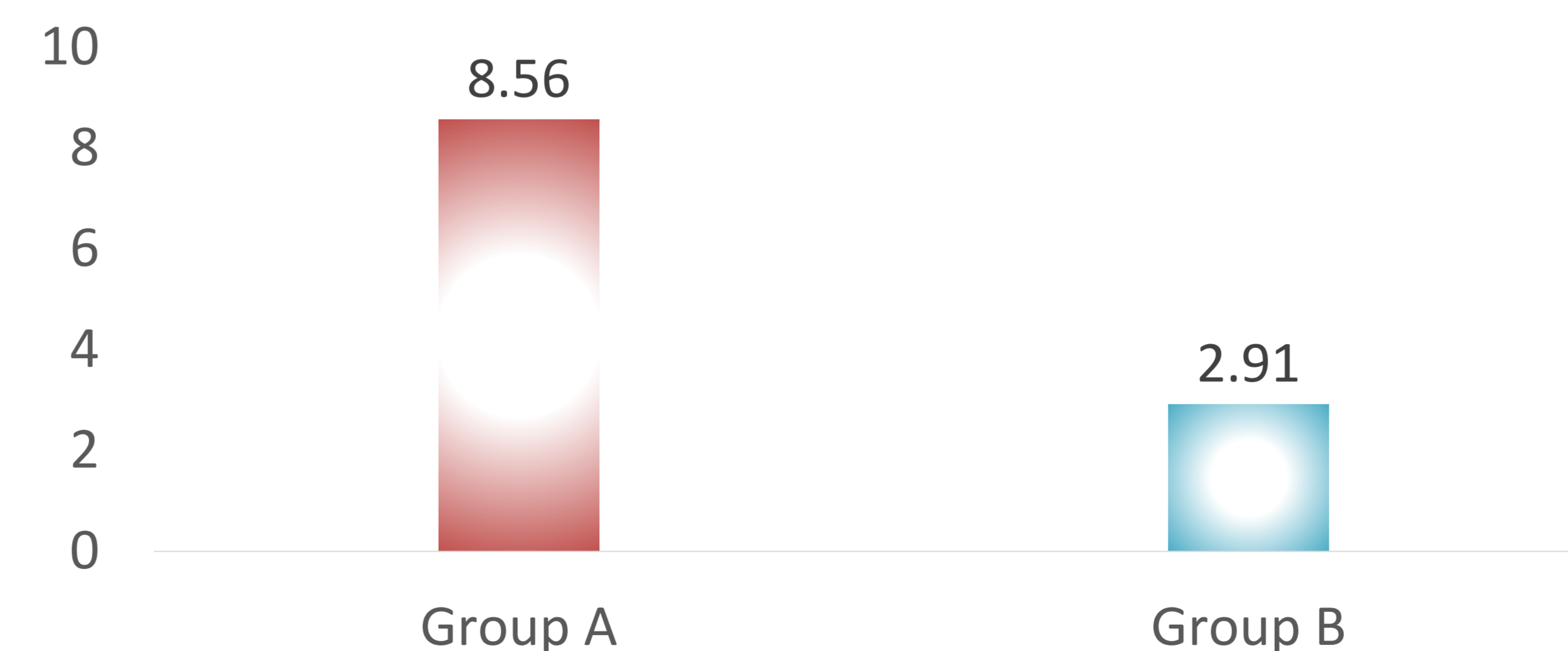


Materials & Methods

- All patients signed an informed consent
- Group A without anesthetic intervention, Group B mac with sedation(fentanyl 2mcgs/kg, midazolam 2mgs)
- Randomly selected 50/50 pts both male female, ASA status 1&2 ages between 21-49, BMI <25.
- Intrarenal stone size of 1-1.5 cms undergoing ESWL as out pts.
- We assessed pain during the procedure precision of focus need for another sitting within one month.
- Standard ASA monitors ECG,SPO2,NIBP 5lts o2 by mask.
- All group B Pts were observed for 2 hrs post procedure in the recovery.
- Mean, Age, Sex and Size of the Renal stone were comparable.



MEAN MOVEMENTS DURING PROCEDURE



Results & Discussion

Group B Pts were comfortable during the procedure

- Spontaneously breathing and regular deep breaths possessed a lower pain score,
- Less movements during the procedure
- Higher precision of focus
- Increased effectiveness
- No repeat sitting was required.

Though ESWL is an outpatient procedure and less painful pt's

- Anxiety about the procedure increases rate of breathing,
- Movement during the procedure which interferes with the focusing and reduces effectiveness of the procedure.
- Perceived pain - high pain score.
- Rate of repeat sitting is higher.
- subjecting these pts to sedation will increase procedural comfort, effectiveness.
- Thus reduces overall cost to the pt.

Conclusions

- ✓ Performing ESWL under anesthesia reduces pain & movements and Increases precision of focus.
- ✓ MAC with sedation remains the Anesthesia of choice for ESWL

References

1992 Mar;58(3):111-6.
2017 Nov 18. doi: 10.1007/s11255-017-1746-0