

HALO TRACTION: A SAVING GRACE FOR SCOLIOSIS CORRECTION

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INTRODUCTION:

Halo Gravity Traction (HGT) has received wide acclamation of late as an adjuvant to operation for scoliosis correction. HGT is usually applied for 2-3 weeks preoperatively. Here we present a case of HGT done 1 week before operation.

REPORT:

A 11-year-old girl, with type 1 neurofibromatosis with no neurological or gastrointestinal complications presented with a noticeable hump at the age of 6 which progressively worsened. She only suffered pain with prolonged ambulation. She was initially managed with serial risser casting from 2019 to 2020 until an operative correction can be done. Preoperatively her echo showed good ejection fraction and lung function testing yielded a severely restrictive lung (FEV 0.47 and FVC 0.5).

HGT was applied for her 1 week prior to op starting at 1kg with gradual increments up to 3kg. She tolerated the halo traction well suffering no neurological deficit and minimal discomfort. She then underwent an en bloc derotation correction for scoliosis. There was a 53% reduction in coronal Cobbs angle (92 degrees preoperatively and 49 degrees postoperatively) as well as a 48% increment of thoracic height (110.83mm preoperatively compared with 164.53mm postoperatively).



Figure 1

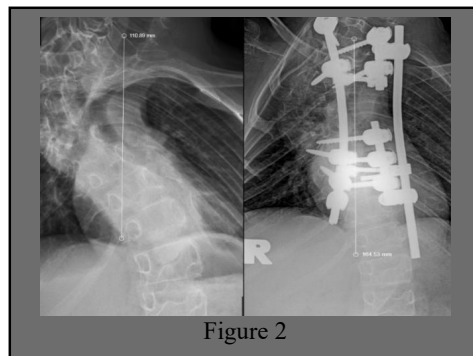


Figure 2

Figure 1: PA pictures showing change of scoliosis with treatment.

Figure 2: Chest Xray showing an increase in thoracic height.

CONCLUSION:

In the armamentarium of scoliosis correction, halo traction preoperatively proves to be a boon in not only correcting severe scoliosis deformity but also increasing tolerance to drastic deformity correction. HGT for two weeks was cited as correcting coronal curves up to 66.3% [1]. In our case report, we achieved a reduction of up to 53% with one week of HGT raising the question: can a shorter period of HGT combined with en bloc derotation achieve a favourable outcome?

REFERENCES:

1. Park DK et al. The efficacy of preoperative halo-gravity traction in pediatric spinal deformity the effect of traction duration. J Spinal Disord Tech. 2013 May;26(3):146-54.