



## **Surgical Site Infections in Growing Rod Systems for Management of Early Onset Scoliosis in 53 patients undergoing 135 procedures: An 8 year prospective audit**

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### **Background**

In Growing Rods systems, multiple surgeries are required with consequential Surgical Site Infection (SSI) rates of over 11% being reported. In 2013, a multidisciplinary review was undertaken to develop a comprehensive SSI prevention protocol and we present the results for the subsequent 8 years.

### **Methods**

A prospective audit of post-operative SSIs at 3 months, in patients undergoing growing rod surgical procedures between January 1, 2014 and January 31, 2022 following introduction of a specific multidisciplinary derived anti-septic protocol. This included pre and peri-operative skin decontamination, antibiotic prophylactic, haemostatic regimes with additional wound specific antiseptic strategies.

### **Results**

Nineteen Early Onset Idiopathic Scoliosis (EOIS) patients underwent 40 growing rod procedures. The mean age was 9.5 years (range 5.2 to 12.9 years) with a male to female ratio of 1: 5.3. The SSI rate per procedure was 5% (2/40) and per patient was 10.5% (2/19). Thirty Four Neuromuscular/Congenital Scoliosis

(NMS) patients underwent 95 procedures. The mean age was 7.3 years (range 2.7 to 12.4 years) with a male to female ration of 1:1. The SSI rate per procedure was 3.2% (3/95) and per patient was 8.8% (3/34).

## **Conclusion**

A multidisciplinary approach with a standardised protocol adopted by all surgeons achieved a low and sustained SSI rate in patients undergoing multiple and complex surgeries that have been historically associated with significantly high SSI rates. Such a continuous evidence based surgical pathway improvement plan and audit improves patients outcomes and is almost certainly very cost effective.