The Harrington Rod: The Future of Spinal Fusion

Kelsey Foster, Biomedical Engineering, University of Rhode Island BME 181 First Presentation, February 25, 2013 <kelsey foster@my.uri.edu>

Abstract—The Harrington Rod was a development for the age. The medical community did nothing but benefit from this development and now that the future is upon us this invention is the basis for many of the new instrumentation used today.

I. INTRODUCTION

THE Harrington Rod was the medical masterpiece of its time. When Dr. Harrington developed this, he originally created the technology to fix spinal deformities he was seeing in his patients with childhood Polio. The original rods were not openly accepted at first, but doctors who believed in its merit quickly added to it with invertebrae screws holding the rods in place. As the advancement in technology began so did the treatment of spinal deformities.

II. METHODS

The original Harrington Rods were long rods with hooks on the end until the 1970's where they were screwed into the spine and were smooth rods:



. However the medical community is moving away from using these rigid rods, which are mainly internal braces, and trying to come up with solutions that are flexible for patients to continue living normally.

III. RESULTS

What has been demonstrated by this technology is that soon after implantation patients only required bracing for pain management purposes. The Harrington Rod, corrected painful and cosmetic deformities of the spine with some impact such as lack of motion, and actual bone fusion. This could be very painful in some instances. The future of corrective spinal surgeries in now in the hands of whomever can do it with the minimum amount of incision size with the maximum of effectiveness, while maintaining a person's active lifestyle. NuVasive is a company specializing in MAS (maximum access surgeries) and is a leading researcher in the field of spinal disorders.



IV. DISCUSSION

With the progression of spinal fusions heading off in such a quality focused direction, the future of the practice can be considered quite safe. For those who are plagued with an ailment requiring them to need a fusion the doors remain wide open as companies race to find the most effective solution to the worlds problems. In the case of the Harrington Rod, although it is used less and less each passing year, it was more than suitable for the times in which it was developed. The horizon is open for more and more people to place their professional opinions and expertice into developing the most useful technology.

References

- Dryer, Joseph W., MD. "Harrington Rod." *Harrington Rod.* N.p., n.d. Web. 20 Feb. 2013
- [2] Spinesanta, Susan. "What Is Spinal Instrumentation and Spinal Fusion?" SpineUniverse. Spine Universe, 12 Sept. 2012. Web. 19 Feb. 2013.
- [3] Gentile, Julie M. "Stabilization in Spine Surgery." SpineUniverse. Spine Universe, 20 Dec. 2010. Web. 20 Feb. 2013
- [4] "Speed of Innovation, Advanced Spine Technology | NuVasive®, Inc." Speed of Innovation, Advanced Spine Technology. NuVasive, n.d. Web. 22 Feb. 2013