

Simple Lithotomy Device for Children

I. Gbobo MBBS, FWACS, B.G. Fente MBBCh,
P.J. Alagoa BMed Sc, MBBS, R.C. Echem BMedSc, MBBS
Department of Surgery, University of Port Harcourt Teaching Hospital,
Port Harcourt, Nigeria.

ABSTRACT

Background: The position of the patient is important for good access during surgery. The aim of this paper is to present a simple lithotomy device for children.

Method: We present a simple easy-to-construct and affordable lithotomy device utilizing locally available materials for paediatric patients.

Results: A simple, cheap and easy-to-construct lithotomy device for children has been used in our centre. It is also easy to sterilize and very durable. No complication has been noticed so far that is attributable to the lithotomy device. It has been used for Swenson's procedure for Hirschsprung's disease, and rectal biopsy.

Conclusion: The affordability of the device will save hospital administrators and the country great cost while still being effective. The device is being recommended for use in developing countries where paediatric operating tables are not available.

KEYWORDS: Lithotomy device; Children; Developing countries.

Paper accepted for publication 12th December, 2005

INTRODUCTION

The position of the patient on the operating table is important for good access during surgery¹. Proper positioning could avoid complications which could arise².

The term lithotomy is derived from two Greek words "lithos" meaning "a stone" and "tome" meaning "a cutting". It is a cutting operation for the removal of calculus, especially a vesical calculus³. The lithotomy position is a supine position with the buttocks at the end of the operating table, the hips and knees being fully flexed with feet strapped in position³. The patient thus lies on his back, the thighs are flexed on the abdomen and the legs on the thighs. The thighs are abducted. The lithotomy position is utilized for general surgical, gynaecologic and urologic procedures⁴⁻⁶. The aim of this paper is to present a simple lithotomy device for children.

The Simple Lithotomy Device

The simple lithotomy device for children is constructed utilizing wood and foam which are locally available. The foam is covered with mackintosh for easy cleaning and sterilization from blood, faecal materials etc. It has a longitudinal flat component for the patients back and two obliquely oriented components for the patient's thighs and legs (Figure 1). For surgery, the thighs and legs are strapped to the obliquely oriented frames (Figures 2 and 3).

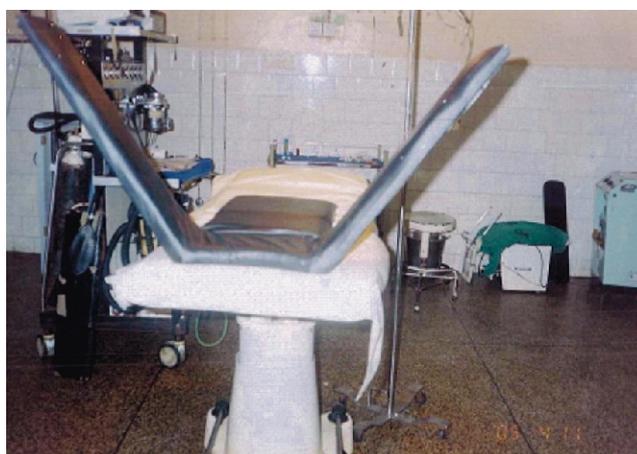


Figure 1. The Simple Lithotomy Device on an Adult Operating Table



Figure 2. The Lithotomy Device with a Paediatric Patient



Figure 3. The Lithotomy Device with another Paediatric Patient

DISCUSSION

In children, the lithotomy position is used for rectal biopsy, surgery for Hirschsprung's disease, anorectal malformations and excision of polyps. In most developing countries, most hospitals do not have a paediatric operating table due to the rising cost of medical equipments especially operating tables. Hence, there is a need for a lithotomy device which can easily be constructed utilizing cheap and locally available materials.

The simple lithotomy device presented can easily be constructed and costs about two thousand naira (N 2,000.00) and can be made in two sizes to cater for all children a small size for neonates and infants and a medium size for older children. The device is placed on the adult operating table as shown in the photographs (Fig, 1,2 and 3).

The need for adequate patient positioning for rectal surgery has led to the development of rectal frame for abdominoperineal surgery⁷. We have utilized the simple lithotomy device successfully for rectal surgeries in our paediatric patients at the University of Port Harcourt Teaching Hospital, Port Harcourt for over five years.

The affordability of the device will save hospital administrators and the country great cost while still being effective. Hence this simple lithotomy device is being recommended for use in developing countries where paediatric operating tables are not available. The lithotomy device is cleaned with any antiseptic solution to reduce infection rate.

REFERENCES

1. Maeda K, Maruta M, Sato H, Masumori K, Aoyama H. "On table" positioning for optimal access for cancer excision in the lower rectum. *World J Surg* 2004; 28(4): 416-9.
2. Miller RD. Anesthesia (Positioning of the patient on the operating table). In: Way LW, Doherty GM (eds). *Current Surgical Diagnosis and Treatment*. 11th Edition. New York: Lange Medical Books/McGraw-Hill, 2003: 191-202.
3. Basmajian JV, Burke MD, Burnett GW, *et al* (eds). *Stedman's Medical Dictionary*. 24th Edition. Baltimore: Williams and Wilkins, 1982: 804, 1126.
4. Meyer RS, White KK, Smith JM, Groppo ER, Mubarak SJ, Hargens AR. Intramuscular and blood pressures in legs positioned in the hemilithotomy position: clarification of risk factors for well-leg acute compartment syndrome. *J Bone Joint Surg (Am)* 2002; 84-A(10): 1829-35.
5. Thorlakson RH, Thorlakson TK. The lithotomy-Trendelenburg position for restorative resection by stapling and abdominoperineal excision of the rectum. *Can J Surg* 1984; 27(3): 246-7.
6. Andrienne R, Vandeberg C, Bonnet P, *etal* Original lithotomy position for transperineal extracorporeal shockwave lithotripsy for distal ureteric calculi with Tripter XI. *Eur Urol* 1992; 22(2): 134-6.
7. Guivarc'h M. [Rectum frame and positioning for abdominoperineal Surgery]. *J Chir (Paris)* 1983; 120(4): 279-81.