An Audit of Sutures Utilised for Inguinal Herniorrhaphy in A Surgical Unit

Pages with reference to book, From 112 To 113

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With a variety of sutures available in the market with marked difference intheirprices, itbecomes important to look at their availability, cost and suitability for common procedures. This study presents the data on differenttypes of sutures used by eight consultant surgeons.

Materials, Methods and Results

Over a six month period, all suture material used by individual surgeons for inguinal hemiorrhaphy was recorded. Results were analysed and variables looked at included the total number of different sutures used, the variation in the types of sutures used by various surgeons and the overall cost of sutures per operation and for individual surgeons was recorded.
Total number of 207 inguinal hermorrhaphies were performed. In all repairs either darning or the Shouldice repair was used. In all cases, the herniorrhaphy was performed from a choice of 9 non-absorbable sutures ie merseline, prolene, ethilon or nurolon, (Tables I and II).

Table I. Sutures commonly used by six surgeons.

W-212	3/0	silk without needle
W-223	3/0	silk without needle
W-8977	2/0	prolene taper cut 25 mm
W-295	2/0	prolene RB30mm
W-752	2/0	prolene straight cutting 75 mm
N-587	3/0	silk RB 20 mm
W-9130	3/0	vicryl RB 30 mm
W-9136	3/0	vicryl cutting 16 mm
W-9114	3/0	vicryl RB 20 mm
N-565	2/0	chromic heavy taper cut 25 mm
W-748	1	ethilon heavy RB 30 mm
W-437	3/0	chromic RB 20 mm
W-320	3/0	ethilon reverse cutting 26 mm
W-290	2/0	merseline RB 30 mm

Table II. Sutures commonly used by four surgeons.

W-8770	3/0	prolene RB 22 mm
W-5985	1	Nurolon J needle
W-8522	3/0	prolene RB 25 mm
W-9250	0	vicryl RB 50 mm
W-441	2/0	chromic RB 30 mm
W-786	2/0	chromic cutting 40 mm

Sixty-five different sutures were used by eight surgeons. 15 by six surgeons (Table I)and6 sutures by foursurgeons (Table II). Numberof various types of sutures used by individual surgeons for perfornung surgeries varied from 6-52 (Table III).

Table III. Various types of sutures utilized in inguinal herniorrhaphy.

W-212	W-320
W-223	W-441
W-859	W-726
W-8570	J-3418
W-8977	W-5571
W-295	W-9377
W-752	W-786
N-586	W-8558
N-333	W-726
W-9130	W-9443
W-9213	W-1718
W-5985	W-7333
W-546	W-548
W-319	W-8710
W-211	W-8731
W-8522	W-112
W-9136	W-9321
W-5333	W-496
W-9114	W-290
N-565	W-8976
W-9444	W-746
N-549	W-787
N-586	W-6107
N-537	W-6101
W-321	W-801
W-792	W-9113
W-9246	W-9375
W-748	W-759
N-437	W-8571
N-570	W-575
W-9250	J-433
W-532	W-9016
W-637	

Total cost of sutures per operation ranged from Rs.73 (US$ 2.3) to Rs.645 (US$ 20) with an average cost of sutures utilised per surgeon per operation, ranging from Rs. 178 (US$6) to Rs.273 (US$ 9).

Comments

Although the cost of sutures in relation to total cost of a surgical procedure is low the total annual cost of suture materials for individual hospitals is substantial[1]. With a huge variety of suture materials available in the market, it makes economic sense to audit the types and cost of various suture materials used for common procedures in each unit. Consensus may be reached in each specialty for the use of suture material for common procedures. Not only will it reduce cost but will also decrease storage space and the time spent by the operating room assistant in requesting for different sutures. It may also reduce the uncertainty faced by trainee surgeons regarding the suture preferences of individual surgeons. The most suitable low cost combination of sutures was 2/0 prolene (RB 30 mm) for the herniorrhaphy, 2/0 chromic (RB 30 mm) for transfixion and ties and a 2/0 prolene (straight cutting 75 mm) for skin bringing the cost to Rs.229 (US$ 7.2).

References

1. Revington, P. and Bowyer. R.C. Sutures: The economics of knot tying techniques. Ann. R. Coil Surg. Eng., 1994; (Suppl)76:281.