“Barbed suture for incision closure in implantable dual-lumen chest ports was associated with lower rates of dehiscence and potentially lower rates of local infectious complications compared with traditional nonbarbed suture.” Ahmed et al (2014).

Reference:

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Abstract:
PURPOSE: To retrospectively compare the incidences of complications with barbed suture versus conventional interrupted suture for incision closure in implantable chest ports.

MATERIALS AND METHODS: A total of 715 power-injectable dual-lumen chest ports placed between 2011 and 2013 were studied. Primary outcomes included wound dehiscence, local port infection, local infections treated by wound packing, early infections within 30 days, and total infections. A multivariate analysis of independent risk factors for port infection was also
performed.

RESULTS: A total of 442 ports were closed with nonbarbed suture, versus 273 closed with barbed suture. Mean catheter-days in the traditional and barbed groups were 257.9 (range, 3-722) and 189.1 (range, 13-747), respectively (P < .01). The rate of dehiscence with traditional suture (1.6%; seven of 442) was significantly higher than that with barbed suture (zero of 273; P = .04). Percentage of total infections was also significantly higher with traditional suture (9.5% vs 5.1%; P = .03). No difference in rate of infection per 1,000 catheter-days was seen between traditional and barbed suture groups (0.0035 vs 0.0026; P = .17). The rate of local infection with traditional suture was significantly higher (2.7% vs 0.4%; P = .02). Additionally, multivariate analysis identified the use of traditional suture as the only independent risk factor for infection (39% vs 25%; P = .03).

CONCLUSIONS: Barbed suture for incision closure in implantable dual-lumen chest ports was associated with lower rates of dehiscence and potentially lower rates of local infectious complications compared with traditional nonbarbed suture.

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