Objective: to report a new technique for repair of small sized (less than 5 fr.), supratrigonal vesicovaginal fistula using a minimally invasive combined laparoscopic and vaginal technique.

Patients and methods: In all 19 women with vesicovaginal fistula were operated upon in the period between 2004 and 2009 in El Galaa teaching hospital using a combined transvesical laparoscopic approach and vaginal approach to both sides of the fistula.

Results: All patients had no leakage after surgery, while 1 case developed urgency.

Conclusion: This approach is a new combined minimally invasive technique where both sides of the fistula was exposed directly and has the advantages of short operative time, essay technique, no or very few intra and post operative complications and short hospital stay.