

Self Adjusting Atrial And Subvalvular Exposure System For Robotic Surgery



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COI disclosure

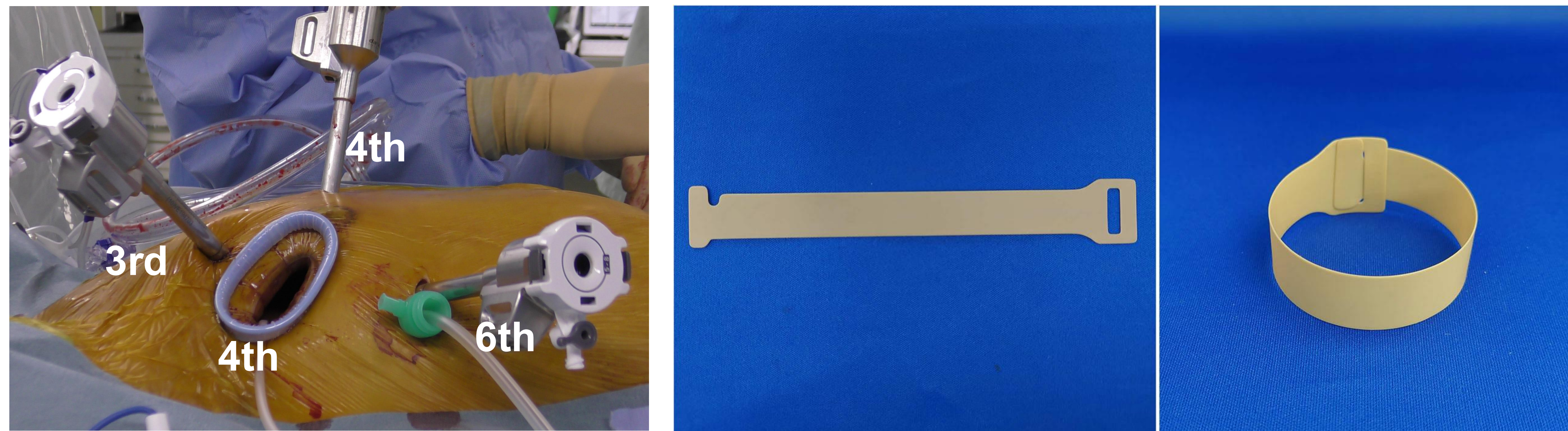
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Robotic cardiac surgery, unlike minimally invasive surgery, requires the assistance of a bedside surgeon to complete the procedure. Console surgeons alone cannot manipulate the surgical field effectively, particularly during subvalvular procedures and mitral annuloplasty near the medial left atrium (LA).

To address this limitation, we have developed a self-adjustable retractor.



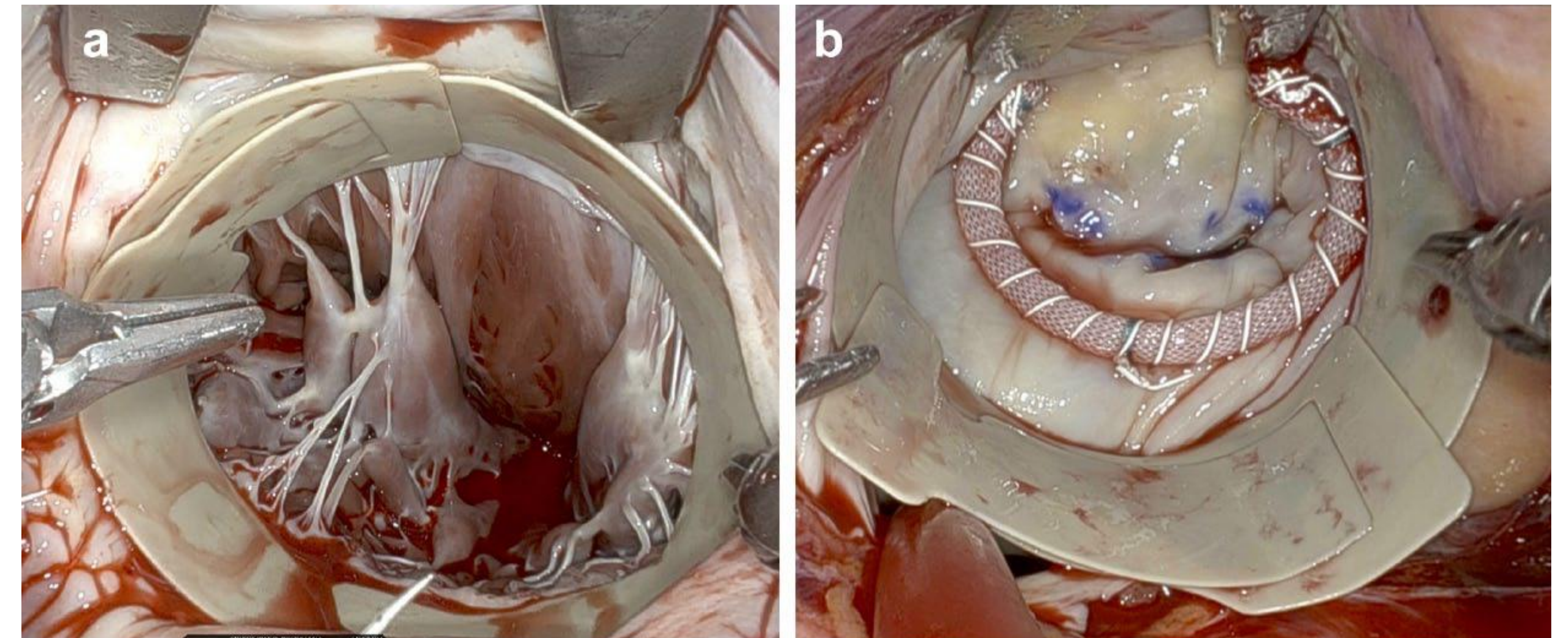
The plate was made of polyether ether ketone with a thickness of 0.4 mm and variable width and length (15mm × 165 mm)

This feature involves a slit hole at the end of the plate, which can be made circular by passing the other end from the outside to the inside

CONCLUSIONS

Our self-adjustable retractable plate offers a versatile solution for obtaining clear views of the subvalvular tissue, mitral annulus during robotic cardiac surgery.

RESULTS



Advantages

1. The plate automatically adjusts to the individual patient's valve size, eliminating manual manipulation
2. it provides a better view of the posteromedial papillary muscle.
3. The auto-adjustment function allows excellent exposure of the entire LA, particularly the medial mitral annulus, which is difficult to observe.
4. The reusable plate offers significant cost savings compared with disposable options
5. The plate is made from PEEK, it is strong, durable, and easy to handle with robotic instruments