

Local anesthetic for TAVI as safe and effective as general anesthetic

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Local anaesthetic is as safe and effective for transcatheter aortic valve implantation (TAVI) as general anaesthetic, according to results of the FRANCE 2 registry presented at ESC Congress today by Dr Romain Chopard from France.

Dr Chopard said: "Numerous studies have shown that TAVI is a viable treatment alternative for patients with severe [symptomatic aortic stenosis](#) who are at very high risk or ineligible for conventional surgical [aortic valve replacement](#). The number of TAVI procedures in France and around the world has increased exponentially in recent years and it is now routine practice in many centres, particularly in Western Europe and North America."

He added: "TAVI was initially performed with the patient under [general anaesthesia](#), intubated and mechanically ventilated. This practice was justified by the relative uncertainty surrounding this new procedure. However with accumulating experience, device improvement and wider use of the femoral approach, more heart teams have switched to local anaesthesia with the patient remaining conscious or only lightly sedated."

Dr Chopard continued: "To date, only a few feasibility studies were available in the medical literature, with a limited number of patients. For this reason, we performed an analysis of data from the FRANCE 2 registry to investigate practices in terms of local versus general anaesthesia in patients undergoing TAVI in France."

FRANCE 2 is a multicentre prospective registry including 33 centres in France and 1 in Monaco. Patients were symptomatic adults with [severe aortic stenosis](#) who were not candidates for surgical [aortic valve](#) replacement because of coexisting illness. Inclusion in the registry was mandatory for all TAVI patients who met these criteria from January 2010 onwards, in accordance with legislation from the French Ministry for Health.

Overall, between January 2010 and December 2011, 3 933 patients who underwent TAVI in France and Monaco were enrolled in the FRANCE 2 registry. Among these, 2 871 procedures were performed using a transfemoral approach and were included in the current analysis. Overall, TAVI was performed under local anaesthesia in 41% and under general anaesthesia in 59%.

The researchers observed a progressive and constant increase in the use of local anaesthesia over time in this French nationwide registry. The proportion of TAVI procedures performed under local anaesthesia increased from 32% in the first 6 months of the registry to almost 50% in the last 6 months of 2011 (figure 1).

Outcomes of patients were identical regardless of the type of anaesthetic used. The outcomes assessed were the rate of successful valve implantation; the rate of complications during the procedures; and the clinical outcome of patients including follow-up to one year. Differences in length of stay were minor (nine days with local compared to ten days with general anaesthetic).

Figure 2 shows the survival curves at one year in both groups. Dr Chopard said: "It should be noted that these results were observed not only in the overall population, but also in patients at high operative risk, such as those with impaired cardiac function, kidney failure, or pulmonary disease."

He concluded: "TAVI is increasingly performed under local anaesthetic in France, and probably in many European countries. Our study shows that local anaesthesia is as safe and effective as general anaesthesia and presents the potential advantage of improved post-procedural patient recovery. These results plead in favour of considering wider use of [local anaesthesia](#), which is less invasive, even in high risk [patients](#) undergoing TAVI with transfemoral access."

Provided by European Society of Cardiology

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