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Transcatheter Aortic Valve Implantation: New challenges for the nursing staff

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Background: The current and recommended treatment of choice for patients with severe symptomatic aortic stenosis is surgical aortic valve replacement (AVR). Recently, a novel transcatheter aortic valve implantation (TAVI) was introduced and is used for the treatment of high risk and inoperable patients. We report the nursing challenges and perspectives following our first year with TAVI.
Methods and Results: From September 2008 to October 2009, nineteen patients underwent percutaneous AVI in our cathlab. Mean age was 77.5±7.5 years, with 69% females. 18 procedures were performed via the transfemoral route while a single procedure was performed via the subclavian route. All procedures were performed under general anesthesia. Procedural success was 100% with no mortality at 30 days. Mean in-hospital stay was 12±7 days. Two dedicated nurses underwent specific training prior to the acquisition of procedure and have taken part in all of them. Special nursing challenges included acquaintance with the new equipment and techniques while working together with a larger medical and anesthesiology team. Special protocols for post-procedural care were developed and implemented in the CCU with emphasis on possible complications including tamponade (16%) and complete heart block that warranted permanent pacemaker implantation (37%).
Conclusions: Transcatheter aortic valve implantation is a safe and effective therapy for high-risk patients that suffer from severe aortic stenosis. The procedure presents new challenges for the nursing team including the acquaintance of new equipment and techniques. New protocols and routines are required for optimal patient care.