Abstract:

Introduction: Clinical pharmacy improves patient safety and secures drug management using information, education and good clinical practices. However, medical device management is still unexplored, and proof of effectiveness is needed. A PICC line (peripherally inserted central catheter) is a medical device for infusion. It accesses the central venous system after being implanted in a peripheral vein. However, complications after implantation often interfere with smooth execution of the treatment. We hypothesise that clinical pharmacy for medical devices could be as effective as clinical pharmacy for medications. The main objective is to assess the effectiveness of clinical pharmacy activities on the complication rate after PICC line implantation.

Methods and analysis: This is a before-after prospective study. The study will begin with an observational period without clinical pharmacy activities, followed by an interventional period where pharmacists will intervene on drug and medical device management and provide personalised follow-up and advice. Sixty-nine adult patients will be recruited in each 6-month period from all traditional care units. The main inclusion criteria will be the implantation of a PICC line. The primary outcome is the decrease in the number of complications per patient and per month. Secondary outcomes are the consultation and hospital readmission rates, the acceptance rate of pharmaceutical interventions, the patients’ quality of life, the direct hospital induced or avoided costs and the participants’ satisfaction. Data will be collected using case report forms during hospitalisation and telephone follow-up after discharge. The analysis will compare these criteria during the two periods.

Ethics and dissemination: The study has received the approval of our Ethics Committee (Clermont-Ferrand Southeast VI, France, number AU1586). Results will be made available to the patients or their caregivers, the sponsor and other researchers when asked, as described in the consent form.

Trial registration number: NCT04359056.

Reference: