

**VISOKA ZDRAVSTVENA ŠOLA V CELJU**

**DIPLOMSKO DELO**

**PREPREČEVANJE ZAPLETOV PRI PERIFERNIH VENSKIH KANILAH**

**PREVENTION OF COMPLICATIONS AT PERIPHERAL VENOUS  
CANNULAS**

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## POVZETEK

**Uvod:** Periferna venska kanila je najpogosteje uporabljen invazivni pripomoček za zdravljenje pacientov v bolnišnici. Z njo so povezani tudi nekateri zapleti, med katerimi je najpogostejši flebitis. Namen raziskave je bil ugotoviti vrste zapletov pri perifernih venskih kanilah in predstaviti ukrepe za znižanje le-teh.

**Metoda:** Uporabili smo kvantitativno metodo raziskovanja, metodo deskripcije. Raziskavo smo izvedli na kirurškem in internističnem oddelku Splošne bolnišnice Celje, na naključno izbrani skupini 108 pacientov, v obdobju enega meseca. Zbrali in analizirali smo podatke o 143 vstavljenih perifernih venskih kanilah. Podatke smo pridobili iz Načrta zdravstvene nege, ki je del pacientove dokumentacije, in jih zabeležili na kontrolno listo, ki smo jo izdelali na podlagi pregleda strokovne literature. Podatke smo obdelali s statističnim programom SPSS 19.0. Za ugotavljanje povezanosti nominalnih spremenljivk spol in število zapletov smo uporabili test  $Hi^2$ .

**Rezultati:** V raziskavi je sodelovalo 58 (53,7 %) žensk in 50 (46,3 %) moških. Povprečna starost vključenih je bila 68,7 let (najmlajši 19 let, najstarejši 94 let). Povprečni čas vstavljenih perifernih venskih kanil je bil 113,9 h ali 4,7 dni. Skupno število zapletov je bilo 35/674 kanilacijskih dni. Najpogostejši zaplet je bila nenamerna odstranitev kanile (12 ali 11,1 %). Rezultati so pokazali, da bi bilo glede na priporočila standarda o potrebnem številu opazovanj mesta vboda potrebnih 2173 opazovanj, zabeleženih jih je bilo 2024 (93,1 %), razlika pa je 149 (6,9 %). Glede na priporočila standarda o potrebnem prebrizgavanju bi bilo potrebnih 4070 prebrizgavanj, zabeleženih jih je bilo 2150 (52,8 %), razlika pa je 1970 (47,2 %). Pacienti so imeli vstavljeno kanilo še 1,1 dan potem, ko vanjo niso več prejemale terapije. Test  $Hi^2$  je pokazal, da spremenljivki spol in število zapletov nista povezani.

**Razprava in sklep:** Število zapletov pri perifernih venskih kanilah v raziskovanem vzorcu je nekoliko nižje od števila zapletov, ki jih navajajo v nekaterih tujih raziskavah, pogostost posameznega zapleta pa odstopa od navedb v teh raziskavah. Zaradi pogostosti nenamerne odstranitve periferne venske kanile je potrebno poiskati ustrežnejšo strategijo pritrjevanja ali uporabiti zaprt sistem, zaradi pogostosti zamašitve te kanile pa je treba povečati frekvenco prebrizgavanj in opazovanj ter natančneje beležiti te posege.

**Ključne besede:** periferna venska kanila, varnost pacienta, zaplet, flebitis, okužba

## SUMMARY

**Introduction:** The peripheral vein cannula is the most frequently used invasive device in treating patients in a hospital. There are some complications connected with this device and the most frequent complication is phlebitis. In the research, we wanted to find out which are the most common complications in using this device and to present undertakings to reduce them.

**Method:** We used the quantitative method of research, the method of description. The research was carried out at the surgical ward and at the internal ward in the Celje General Hospital. We chose 108 patients randomly in the period of one month. We gathered and analysed the data about 143 inserted peripheral vein cannulas. We obtained the data from the Health Care Plan which is a part of a patient's documentation. We put the data on the control list which was made on the basis of the overview of the professional literature. The data were processed by means of the statistical program SPSS 19.0. For finding out the connection between the nominal variables sex and the number of complications, we used the  $\chi^2$ -test.

**Results:** There were 58 (53,7 %) women and 50 (46,3 %) men included in the research. The average age of the included individuals was 68,7 years (the youngest one was 19, the oldest one was 94). The average time of the insertion of the peripheral vein cannulas was 113,9 h or 4,7 days. The total number of complications was 35/674 cannulation days. The most common complication was the unintentional removal of a cannula (12 or 11,1%). We found out that according to the standard recommendation about the sufficient number of observations of the incision points, 2173 observations would be needed, 2024 (93,1 %) were recorded, the difference is 149 (6,9 %). According to the standard recommendation about the required flushings, 4070 flushings would be needed, 2150 (52,8 %) were recorded, the difference is 1920 (47,2%). The patients had a cannula inserted for 1,1 days after they no longer received therapy through it.  $\chi^2$  test showed that the variables sex and number of complications are not connected.

**Discussion and Conclusion:** The number of complications with peripheral vein cannulas in the research sample is a bit lower than the numbers in some foreign researches. The frequency of an individual complication differs from the numbers in those researches. Due to the frequency of the unintentional removal of a peripheral vein cannula, it is necessary to find a more suitable method of attachment or to use a closed system. Due to the frequency of the blockage of a peripheral vein cannula, it is necessary to increase the frequency of flushings and their observations and to record these interventions in greater detail.

**Key words:** peripheral vein cannula, safety of a patient, complication, phlebitis, infection