

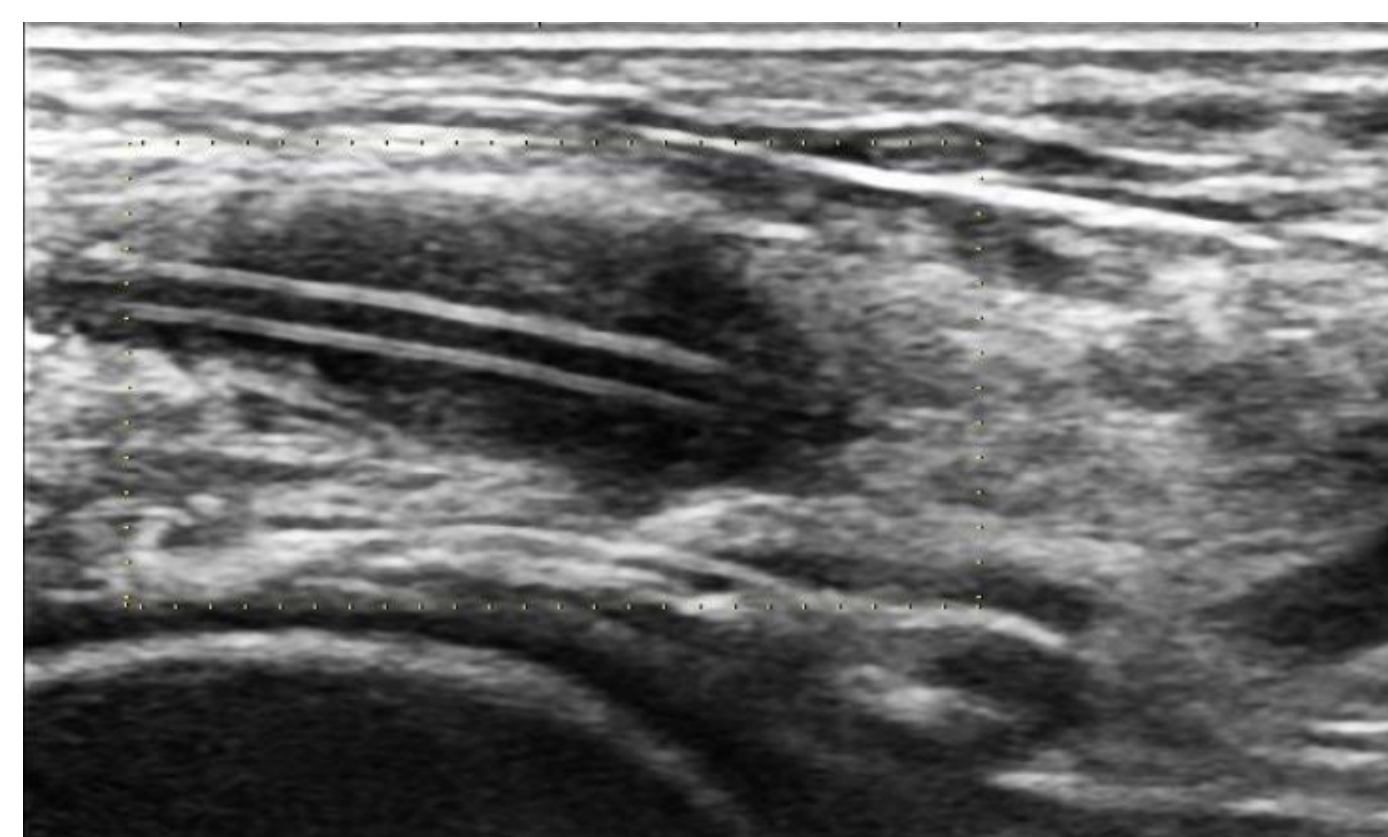
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Background: The risk of catheter-related thrombosis (CRT) is increased in cancer patients in comparison to the average population. It has been suspected, that patients with testicular tumours, undergoing systemic chemotherapy, who have peripherally inserted central venous access - PICC, have a higher risk of CRT. This hypothesis is supported by the clinical experience of oncologists and the expert opinion of international experts.

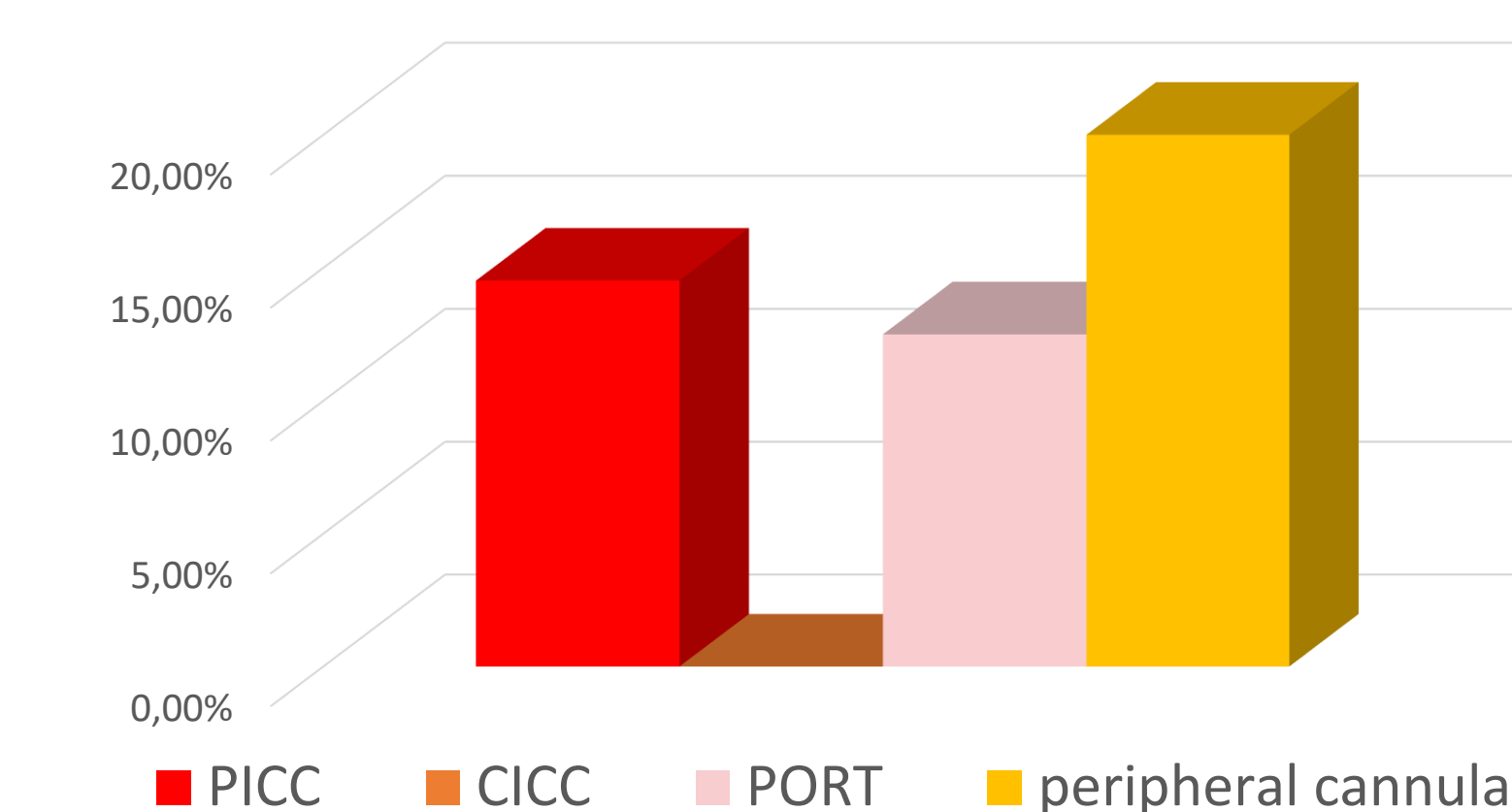
Objectives and methods: We retrospectively evaluated the incidence of CRT and time to CRT onset, in patients with testicular cancer, who underwent chemotherapy (bleomycin/ etoposide/ cisplatinum -based regimen) and had a short/medium/long-term venous access. In all patients, in two centres in the Czech and Slovak Republic, central venous access was placed concerning the recommendations and protocols (RaPeVa, RAVESTO) and following all the rules and standards, by trained personnel in large centres.

Results: The total number of evaluated patients was 282. In average, CRT was confirmed in 13.12% (37/282 catheters). According to type of venous access, the incidence of CRT ranged from none to 20% (PICC: 14.52%; CICC:0%; PORT: 12.5%; peripheral cannula: 20%) – in mostly young patients without co-morbidities. In the most frequent access- PICC- the thrombosis rate was 10.89% and 21.80% respectively, and the average time till the CRT occurrence was 42.7 days (median 28 days). Patients with a higher pathologic stage (stage III) were significantly more likely to experience thrombotic event when compared to patients with lower stage disease. Due to the observed results, in these two centers we increased the prophylaxis to a higher dose of LMWH (0.8 or 1.0ml subcutaneous injection once daily). At the higher prophylactic dose, PICC thrombosis did not occur in any patient.

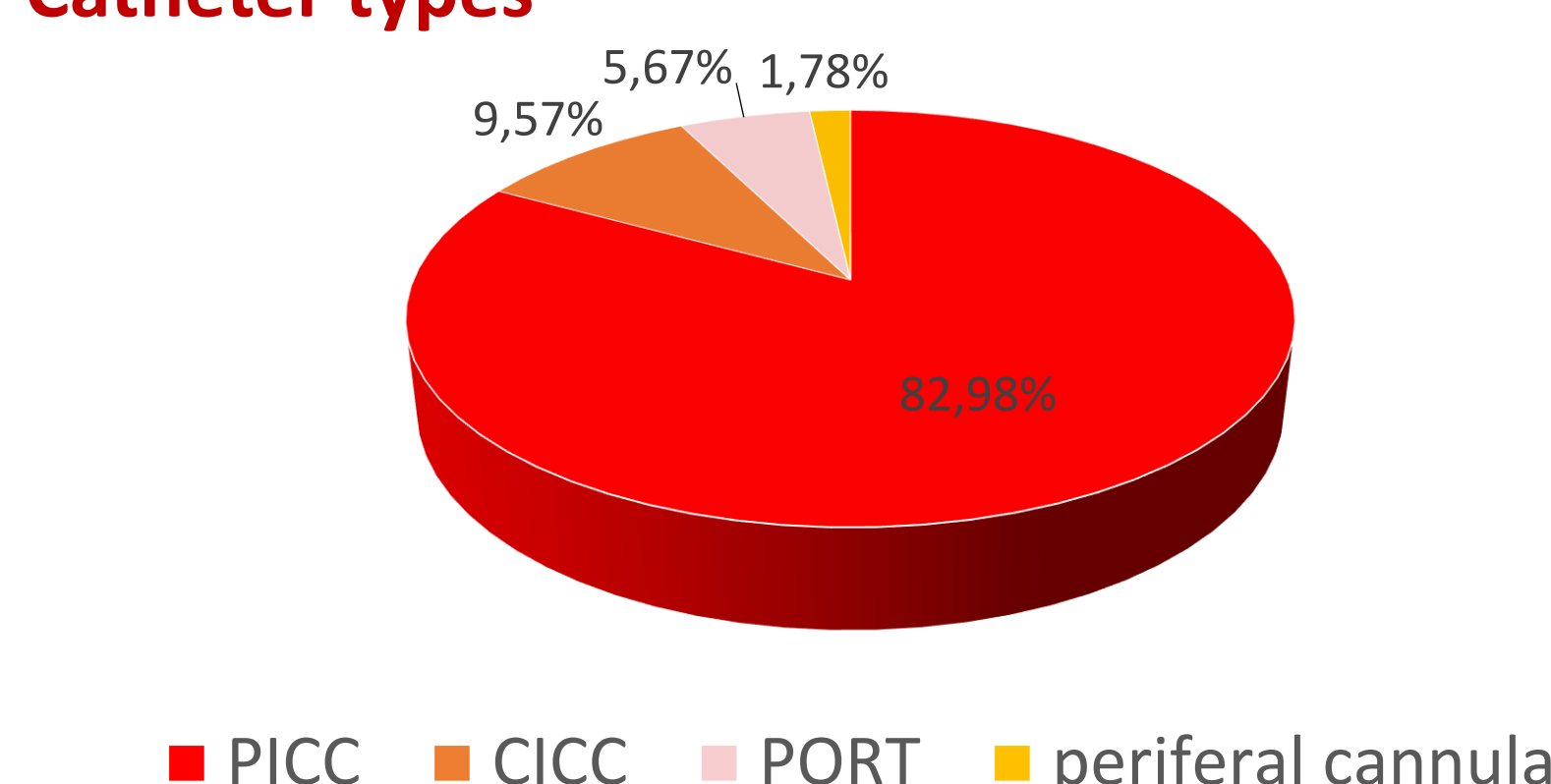
Incidence of venous thrombosis in testicular cancer patients with PICC		
	PICC	thrombosis
Czech Republic	78	17 / 21.80 %
Slovak Republic	156	17 / 10.89 %
PICC overall:	234	34 / 14.52 %
Other catheter types		
	number	thrombosis
Tunneled CICC	27	0 / 0 %
PORT	16	2 / 12.5 %
Peripheral cannula	5	1 / 20 %
Overall number of catheters:	282	
Overall number of thrombosis:	37 / 13.12 %	



Incidence of thrombosis



Catheter types



Pericatheter thrombosis in the basilic vein

Conclusions: This group of testicular cancer patients in general has a higher incidence of thrombosis and thromboembolic events. We assume, that the combination of platinum-based chemotherapy simultaneously with the administration of corticosteroids for antiemetic premedication, and in addition, the use of G-CSF for the prophylaxis of neutropenia, contribute to the development of a prothrombotic state. This condition can contribute to the development of catheter-related thrombosis. Further studies are needed to confirm this assumption.

Disclosure: Authors have nothing to disclose.

References: Shields LBE et al. Thromboembolic events in metastatic testicular cancer treated with cisplatin-based chemotherapy. World J Clin Oncol 2021; 12(3):183-194; Hauges HS et al. Thromboembolic Events During Treatment with Cisplatin-based Chemotherapy in Metastatic Testicular Germ-cell Cancer 2000–2014. European Urology Open Science. Vol.32, 2021, p19-27

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