Summary:

Comparison of CT (power) and standard venous port systems in long-term central venous access in outpatients.

The aim of our study was to evaluate benefit of use of portsystems during contrast enhanced CT examinations. We studied implantation of power port systems in short and middle time period and also compared the procedure to literature informations. We also studied benefit of power port implantation procedure done under sonographic and fluoroscopic navigation.

Materials and methods:

There were collected patients of two cooperating departments of interventional radiology. All our patients included in the study had implanted power port systems, the procedure was done by sonographic and fluoroscopic control. We studied periprocedural and late complications of the procedure. We also studied benefit of the power port for contrast enhanced CT follow up during oncologic therapy and frequency of port using by medical staff. We studied perception of implanted power port in our patients in their daily life.

Results:

The primary technical success of the procedure was 100 % and we had no postprocedural pneumothorax observed. The technique of implantation of ports and power ports is the same. The average follow up in our study is 291,5 days (2-294 days). Five patients died in follow up period 2-594 days. There was 30 days mortality in our group 0,8 %. There were 95,2 % patients in our group with no postprocedural discomfort because of port implantation.

We implanted fiftyseven 8F catheters and sixtyfour 6F venous catheters. The most cannulated vein was the right jugular vein (79 cases), then right subclavian vein (23 cases), the left jugular vein (16 cases). We cannulated the left subclavian vein only in 3 cases.

The average procedure time was 32 minutes (25- 45 minutes) in our study.

In our study we have 105 patients in follow up period of average 291,5 days. During this follow up there were done 55 contrast enhanced CT procedures in 46 (43,8 %) patients and in 4 patients were CT done several times. There were 59 patients (56,2 %), that had no CT exam procedure during our follow up. In our group there were used port systems for contrast enhanced CT in 18 patients and 28 patient had contrast enhanced CT done by peripheral vein contrast administration. The average speed of contrast media admission in our sudy was 2,7 ml/sec. (2 – 4 ml/sec). The most frequent diagnosis in our group were colorectal tumors (41 %), hematological

disseases (18,2 %) and breast carcinoma (14,5 %). In our study were port system used in out clinic patients for blood examination only in 11 patients (10,5 %).

Conclusion:

We concluded that port implantation by sonographic and fluoroscopic control by interventional radiologist is safe method with minimal procedural and postprocedural complication as infections and other. We concluded, that there is no reason for post procedural chest control because of PNO exclusion. All patients in our study group felt good benefit for their life after port implantation for their therapy and in cases of port using during contrast enhanced CT control.

We predict increase of power port technology in daily medicine and in cases of contrast enhanced CT controls. Todays medical staff is not wery friendly with port using because of small knowledge of itś potential benefit. There should be done more education courses for medical staff, including doctors.