Safety and efficiency of the port-catheter for intensive intravenous chemotherapy in patients with multi-drug resistant tuberculosis and extensively drug-resistant tuberculosis

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CONFLICT OF INTERESTIS: none

PURPOSE. To study the efficacy and tolerability of the port catheter for continuous intravenous infusion in patients with MDR-TB and XDR-TB.

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MATERIALS AND METHODS. In a controlled study examined the effectiveness of the port catheter during an intensive 7-component anti-TB treatment with intravenous application of 3 anti-TB drugs (moxifloxacin, PAS, linezolid) in 16 patients with MDR-TB and XDR-TB. In the comparison group, which is formed by a pair of matching according to the drug resistance profile of MTB, the same intensive chemotherapy regimens in which the infusion of these drugs was carried out by daily injections of veins. In each group dominated patients with retreatment cases — 14 (87.5 %) patients. The planned duration of intravenous therapy was 2—4 months.
RESULTS. Port-catheter for continuous infusion of combination of anti-tuberculosis drugs in comparison to their administration in the usual way ensures high efficiency and safety. In any case, was not observed phlebitis, no complaints of pain at the injection site, only 12.5 % cases were hematoma after setting the port in comparison to 100.0 % of patients with daily venous injections. In the study group was not a single case of interruption of intravenous infusion. In the control group, 56.2 % of patients discontinued intravenous treatment due to inability to penetrate the vein, patient's complaints pain or phlebitis. At the end of the intensive phase of chemotherapy sputum conversion and disappearance of clinical symptoms were observed in 15 (3.7 %) patients of the study group, that was 26.7 % higher, than in control group ($p>0,05$). We found significant difference in terms of sputum conversion, which occurred in the study group through (2,2±0,1) months vs (3,7±0,3) months ($<0,05$) in control group.
CONCLUSIONS. Port-catheter for long-term daily infusions of combination of anti-TB drugs compared with their usual daily injections is safe and effective method of intravenous therapy. It is not accompanied by subjective complaints of patients and the development of phlebitis, which leads to early sputum conversion. With daily injections of veins 56.2 % of patients prematurely discontinued treatment through intensive local complications or phlebitis. Application of intensive treatment with the introduction of anti-TB drugs allows for faster time to achieve sputum conversion.

KEYWORDS: intravenous anti-TB chemotherapy, port-catheter, multi-drug resistant tuberculosis,extensively drug-resistan tuberculosis.