Combined treatment (MWA&TACE) of liver metastases from pancreatic tumor

Physician: Roberto Iezzi, MD
Location: Institute of Radiology - Bioimaging Department Agostino Gemelli Hospital Foundation - Catholic University - Rome - Italy

CLINICAL CASE
59 yo woman in follow-up after pancreatic resection from advanced-stage pancreatic ductal adenocarcinoma (two years prior the presentation). In the interim, she underwent wedge resection of lung lesions, cervical cortectomy and fusion (c-6 metastasis) and several lines of chemotherapy (gemcitabine-based). Abdominal contrast enhanced CT revealed two hepatic metastatic lesions: 1.4x2.4 cm metastasis in segment III and 2.6x4.8 cm metastasis in segment VI (Fig 1).
Laboratory data: hemoglobin (Hb) 12.2g/dL; platelet count (PLT) 210,000/mm³; prothrombin time (PT) 14s; INR: 1.08; CA 19-9: 80.9U/mL.

PROCEDURE
Based on lesion size, we decided to perform a single-step combined treatment of MWA followed by DEB-TACE for the large sVI metastasis and MWA only for the sIII lesion, in the same stage in angiosuite.
Procedure: Patient under sedation with fentanyl citrate (0.1-0.2 mg) and local anesthesia. Patient also received antibiotic prophylaxis and gastric protection. Hepatic angiography was performed using a right common femoral approach to map arterial tumor supply. Under US-guidance, a 14G uncooled TATO probe was introduced into the sVI nodule with 40 W of applied power in 10 minutes. During the same single session, a second 14G uncooled probe was inserted under US guidance in sIII lesion, with 30 W of applied power in 10 minutes. Immediate angiography revealed a reactive hyperaemia in sVI lesion (Fig 2); for this lesion, superselective transarterial chemoembolization using 100μm drug-eluting embolics (LifePearl; Terumo Corp) loaded with doxorubicin 50 mg was also performed using a coaxial technique and a 2.7-F microcatheter (Progreat; Terumo Corp). The full planned dose was delivered and a complete tumour arterial devascularisation was achieved.

FOLLOW UP/ CONCLUSION
Patient tolerated the procedure well, without significant post-embolisation syndrome, and without reported complications; hospital discharge obtained 24 hours after procedure. 1-month CT follow up showed a complete response, with a treated area of 2.6x3.6 cm for sIIl lesion and 3.8x5.6 cm for sVI lesion, without residual or recurrent vital tissue (Fig 3), as also confirmed by 6-month CT follow-up (Fig 4).
The possibility to handle up more applicators with a single generator allows interventional radiologists to operate more lesions in a single session. Furthermore, the coverage in Teflon makes the probe echogenic and non sticky allowing an easy and very high accurate positioning in the lesion, without risks and complications.

PRODUCTS USED
Two 14G TATOpuro antenna.