DSM-TPCE (TRANSPULMONARY CHEMOEMBOLIZATION) OF NON-SMALL CELL LUNG CANCER (NSCLC) IN THE LEFT HILAR REGION

CASE REPORT

Author: **Thomas J. Vogl, MD**
Johann Wolfgang Goethe University
Frankfurt/Main, Germany

Patient

- 62 year old male
- Confirmed **unresectable NSCLC (non-small cell lung cancer) in the left hilar region, disease stage T3 N1**
- Prior treatment:
  - Bronchoscopy, histological prove
  - 8 courses of systemic chemotherapy using carboplatin and etoposide, partial remission
- After 3 months recurrent tumor growth on the left side
- Comorbidities:
  - Cardiac insufficiency grade 1-2
  - Slight dyspnea due to emphysema
  - Clinical contraindications for lung resection
- Lab parameters: **CEA** 23 ng/ml | **Thrombocytopenia** 60,000/µl
- Tumor board decision: DSM-TPCE with Mitomycin, Gemcitabine, and Cisplatin

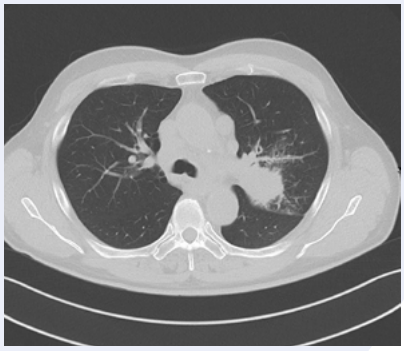

Figure 1: Baseline CT in lung window showing left hilar lesion measuring 4.3 x 3.6 cm

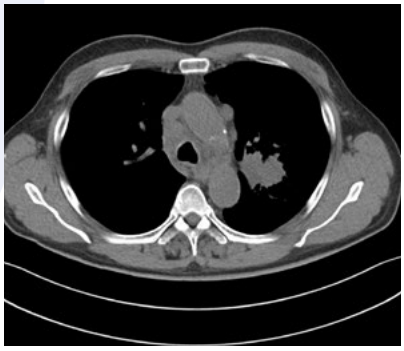

Figure 2: Baseline CT in soft tissue window

TPCE procedure

- 3 sessions of TPCE (transpulmonary chemoembolization) procedures were performed in an angiographic suite in a four-week interval
- Under local anesthesia, the pulmonary artery was accessed via femoral venous approach using a 5-French headhunter catheter under fluoroscopic guidance
- After diagnostic pulmonary angiography, tumor-supplying pulmonary artery branches were selectively catheterized
- This selective catheterization results in obstruction of the arterial supply, with resultant regional ischemic necrosis of tumor while minimizing damage to the normal lung parenchyma
- Bolus injection of the chemotherapeutic agents (10 mg Mitomycin, 500 mg Gemcitabine, 50 mg Cisplatin) was performed, followed by embolization with 5–10 ml of Lipiodol® (Guerbet) and **200–450 mg of degradable starch microspheres** (EmboCept® S DSM 50 µm, PharmaCept GmbH)

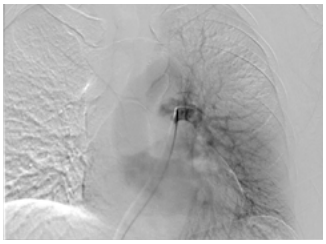

Figure 3: Angiography image during TPCE

DSM-TPCE (TRANSPULMONARY CHEMOEMBOLIZATION) OF NON-SMALL CELL LUNG CANCER (NSCLC) IN THE LEFT HILAR REGION

Outcome

- Patient experienced no adverse events, with dismission after 24 hours, without any pain or periprocedural complications
- The patient received three consecutive TPCE procedures in one-month intervals
- **3-month CT follow-up showed a partial response**
- Post-procedural tumor markers: strongly declining, **CEA** 5 ng/ml | **Thrombocytopenia** 90,000/µl

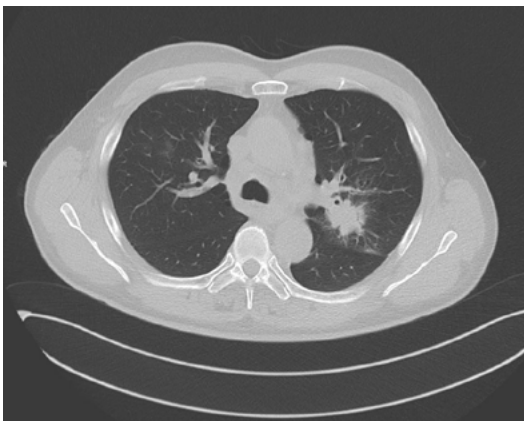

Figure 4: CT after first chemoembolization showing a decrease to 2.5 x 2.6 cm

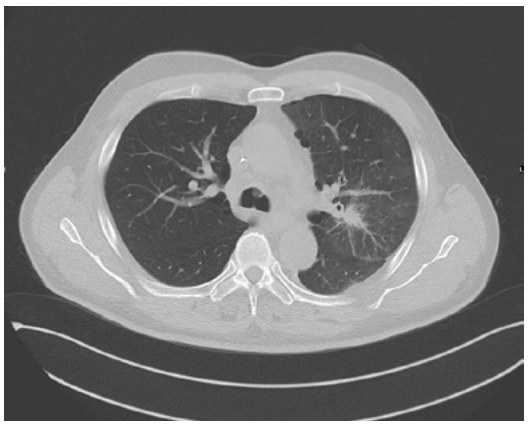

Figure 5: CT after third chemoembolization showing a decrease to 1.2 x 1.3 cm

Outlook

- Further transpulmonary chemoembolization procedures will be conducted in case progressive tumor size is apparent

CONCLUSION

- EmboCept® S DSM 50 µm is an **easily administered embolizing agent**
- Because of the temporary nature of its occlusion, DSM-TPCE can be **repeated several times**
- This case shows **impressive efficacy of TPCE with degradable starch microspheres in lung cancer**
- TPCE is a very safe and well-tolerated procedure since **no side effects or non-target embolization** appeared
- EmboCept® S DSM 50 µm is **safe and effective to use in TPCE**

DSM Degradable Starch Microspheres
TPCE Transpulmonary chemoembolization

PharmaCept GmbH, Bessemerstr. 82, 12103 Berlin, Germany
Phone: +49-(0)30–7565985-0, Fax:+49-(0)30–7565985-11, info@pharmacept.com
EmboCept® is a registered trademark of PharmaCept GmbH.
© 2021 PharmaCept GmbH, Berlin, Germany.
202012007-12/2020

pharmacept.com

PharmaCept

EmboCept® S
DSM 50 µm