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Introduction

Primary liver cancer (HCC) and liver metastases from colorectal cancer are frequently occurring tumors worldwide. 10-20% of such patient can be treated with curative intent. Radioembolization with Y-90 is minimally invasive technique to treat liver cancer by injecting tiny radioactive particles directly into the hepatic artery. The technique is alternative for inoperable tumors and shrink tumor for other treatment like liver transplant. Pre-treatment intra-arterial 99mTc-labelled albumin macroaggregated albumin (99mTc-MAA) scintigraphy is mandatory to quantify potential liver-lung shunting and to exclude reflux to bowel, stomach or pancreas.

Cases

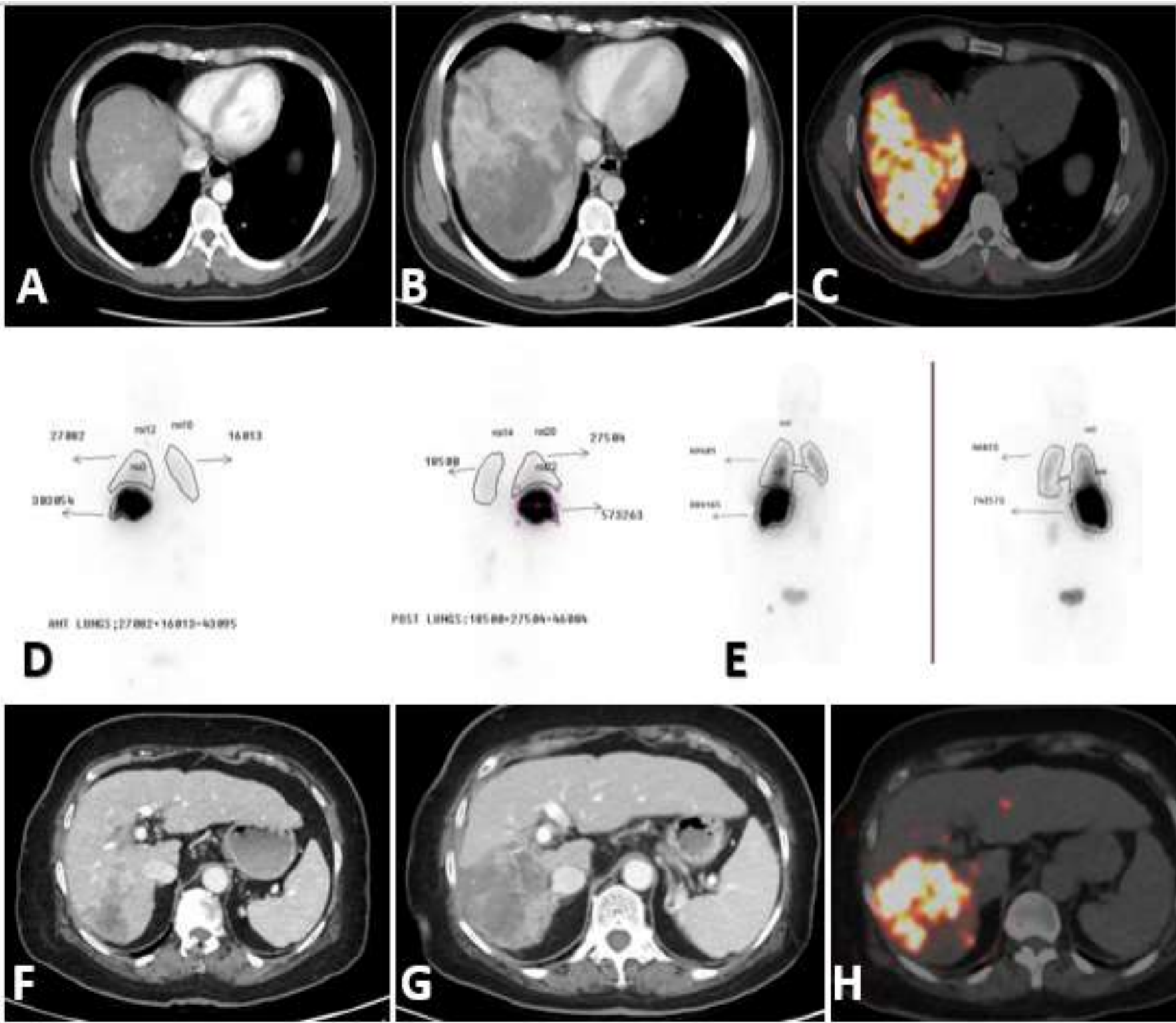


Fig. A & F are the pretherapy and Fig. B & G are the post therapy follow up CT scans of two different patients. Fig. C & H are the axial image of post therapy PET CT images acquired 24 hours after therapy. Fig. D & E are the pre therapy 99mTc MAA images of the two patients and calculated shunts were within normal limits for Y-90 therapy.

References

- Hamad et. Al. Yttrium-90 Radioembolization: Current Indications and outcomes. J Gastrointest Surg. 2023 Mar; 27(3):604-614.
- Phan NH et. Al. TACE vs. TARE for HCC >8cm: A propensity score analysis. Abdomen Radiol (NY). 2025 Mar; 50(3): 1198-1208.
- Weber et. Al. EANM procedure guideline for the treatment of liver cancer and liver metastases with intra-arterial radioactive compounds. Eur J Nucl Med Mol Imaging 49, 1682–1699 (2022).

Methods

After initial assessment of patients and discussion in multidisciplinary team meeting (MDT), reviewing all factors like diagnosis, imaging findings, laboratory results, calculation of liver volume, percentage of lung shunting, patients are booked for the procedure.

- Treated patients: 05 [04 males, 01 Female]
- Mean Age 61.8 years
- Pre therapy MAA scan: All patients
- Follow up with CT: 02-03 months

Objective:

To evaluate the adequacy of the Y-90 therapy procedure and to see the response of therapy.

Conclusion

TARE provides significant longer progression free survival than TACE although these two treatments do not significantly differ in terms of overall survival. TARE generally has better side effects profile than TACE. Adequate response evaluation can be achieved with larger patient volume and longer period of follow up.