肝臟腫瘤射頻消融術

簡介

射頻消融術是一種手術應用於治療肝臟腫瘤，適合原發性肝癌和轉移性肝癌。治療的概念是借助電子技術進行局部加熱，當溫度超過60℃可使用腫瘤組織壞死。根據腫瘤大小及位置，可經皮穿刺或開腹進行手術。並同時使用超聲波引導電極及監視腫瘤之消融程度。本院採用即棄型電極射頻系統(RADIONICS COOL TIP)。研究已證實手術是安全及有效，單發腫瘤病例，腫瘤完全消融率為90至95%。

準備工作

- 施行前需要作血液化驗、肝功能測試、胸部X光檢查、心電圖及電腦掃描
- 經皮穿刺通常在局部麻醉下進行
- 需在手術當日入院
- 手術前6小時需禁食
- 需簽署手術同意書
- 若需微創或剖腹施行消融腫瘤則需要為全身麻醉作準備

過程

由有經驗放射科醫生執行（圖1）

- 腫瘤體積小，可在局部麻醉之情況下，經皮膚穿刺進行消融。要局部麻醉，可能需要注射鎮靜藥物

圖 1

- 腫瘤體積大，位於肝臟頂部或緊靠鄰近器官如膈肌或結腸，則需要用內視鏡或全身麻醉剖腹進行手術（圖2）

圖 2

- 肝臟腫瘤射頻消融術是在超聲引導下通過一個帶有冷卻系統的探針來施行。根據腫瘤大小採用單頭或多頭探針（圖3），目的是使腫瘤及其一厘米的邊緣組織壞死

圖 3

- 手術後四週用電腦掃描或磁力共振評估。如仍有腫瘤殘留，需重複治療或改用其他治療方案，如肝動脈化療栓塞法（TACE）

護理及建議

- 病人需要留院觀察
- 醫生會密切觀察重要體徵及抽取血液化驗肝功能
- 醫生會給予足夠的鎮痛藥
- 當日即可恢復飲食
- 若情況穩定可以出院
- 請依時往肝膽外科專科門診覆診

併發症

- 肝臟膿腫、出血、膽管及內臟損傷等機會率約10%
- 死亡風險約0.5至1%

如有任何查詢，請聯絡你的主診醫生

以上資料由瑪麗醫院外科部提供。

瑪麗醫院
Queen Mary Hospital

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RADIOFREQUENCY ABLATION FOR LIVER TUMORS

瑪麗醫院 Queen Mary Hospital	Pamphlet Topic & Department Code
Ownership	QMH/Surgery-20
Last review/revision	May/2023
Approval	HKWC Information Pamphlet Working Group
Distribution	As requested

RADIOFREQUENCY ABLATION FOR LIVER TUMORS

Introduction

Radiofrequency ablation (RFA) is a local ablative treatment modality for liver tumors including primary and secondary liver cancer. RFA is a localized thermal treatment technique that causes tumor destruction by heating the tumor tissue to temperatures exceeding 60℃. The procedure can be performed through percutaneous (skin puncture), open and laparoscopic approaches depending on the location and size of the tumors. Ultrasound is used to guide the electrode and to monitor the ablative procedure.

The clinical safety and efficacy of RFA have been well demonstrated by studies. The complete ablation rate is 90-95% of a single tumor.

Preparation

Patients selected for RFA (percutaneous or open) will be required to undergo some pretreatment baseline tests including:

- Blood tests including blood count, liver function test, chest X-ray, ECG and CT scan
- When local anaesthesia is required, patients are admitted on the day of treatment and kept fasted for 6 hours before RFA
- For RFA through the open or laparoscopic approaches, patients need to be admitted before the procedure for anaesthetic workup. The procedure will be performed under general anaesthesia in operating theatre

Procedure

- For accessible small tumors, procedure is performed percutaneously under local anaesthesia with sedation (Figure 1) by an experienced interventional radiologist

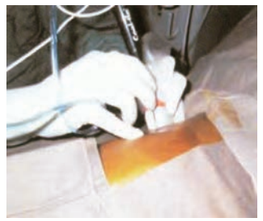

Figure 1

- For tumors that are large in size, located at the dome of the liver or close to adjacent structures e.g.the diaphragm or colon, RFA will be performed by laparoscopic or open surgery under general anaesthesia (Figure 2)

Figure 2

- RFA is performed using a probe with either a single needle, or a clustered probe (Figure 3) depending on the tumor size. The aim is to obtain complete ablation of the tumor plus a 1cm tumor-free margin. The procedure is performed under ultrasound guidance

Figure 3

- A contrast CT or MRI scan is performed at 4 weeks after the ablative procedure to check for the completeness of ablation. Any residual tumors will be treated with repeat session of RFA or other modalities such as Transarterial chemoembolization (TACE)

Postoperative Care & Advice

- Patients will stay in hospital during the initial postoperative period. Blood tests (liver function test) and other vital signs will be closely monitored
- Adequate pain control is prescribed by your doctors
- Patients can resume a normal diet soon after RFA and will be discharged if the clinical condition is stable
- All patients who have undergone RFA will be followed up in the specialist clinic by hepatobiliary surgeons

Complications

- The complication rate is about 10% which includes liver abscess formation, bleeding, bile duct and injury to other organs
- The risk of procedure related death is about 0.5-1%

Should you have any queries, please consult your doctor-in-charge

Information provided by the Department of Surgery, Queen Mary Hospital.