肝臟腫瘤射頻消融術

簡介

射頻消融術是一種新的手術治療肝臟腫瘤，適應症包括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60ºC可使腫瘤組織壞死。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）。雖然這種手術目前仍處於臨床試驗階段，尚未與其他模式進行前瞻性隨機研究比較，然而對照研究已證實手術是安全及有效。

準備工作

- 施行前需要作血液化驗、肝功能測試、胸部X線檢查、心電圖及電腦掃描
- 經皮穿刺通常是在局部麻醉下進行
- 需在手術當日入院
- 手術前六小時需禁食
- 需簽署手術同意書
- 若需剖腹施行消融腫瘤則需要全身麻醉及提前一日入院以便安排麻醉醫生進行健康評估

過程

由有經驗放射科醫生執行（圖1）


圖1

- 若擬經皮穿刺將腫瘤消融，要局部麻醉，並可能需要靜脈注射鎮靜藥物
- 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（RADIONICS，BURLINGTON，MA，USA）。根據腫瘤大小採用單頭或多頭探針（圖2），目的是使腫瘤及其一厘米的邊緣組織壞死

圖2

- 手術後一至兩週用電腦掃描評估。如仍有腫瘤殘留，需重復治療
- 如腫瘤位於肝臟頂部或緊靠鄰近器官如膈肌或結腸，則需要全身麻醉剖腹進行手術（圖3）


圖3

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、出血及內臟損傷等機會率約7%
- 死亡率約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
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肝臟腫瘤射頻消融術

RADIOFREQUENCY ABLATION FOR LIVER TUMORS

QMH/SRG-20(UGI.5)
12/2002

RADIOFREQUENCY ABLATION FOR LIVER TUMORS

Introduction

Radiofrequency ablation (RFA) is a new 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°C. In our center, we use the Radionics Cool-tip® RF System with disposable electrodes. The procedure can be performed through percutaneous and open approaches depending on the location and size of the tumors. Ultrasonography is used to guide the electrode and to monitor the ablative procedure.

The procedure is currently under clinical trial. To date, no prospective randomized study exists to compare RFA with other treatment modalities for liver tumors. However, the clinical safety and efficacy of RFA have been demonstrated by uncontrolled studies.

Preparation

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

- Blood tests, liver function test, chest X-ray, ECG and CT scan
- When local anaesthesia is required, patients can be admitted on the day of treatment and kept fasted for 6 hours before RFA
- For RFA through the open approach, patients need to be admitted one day before the procedure for anaesthetic work-up. The open RFA will be performed under general anaesthesia in operating theatre

Procedure

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

Figure 1

- RFA is performed using a cool-tip probe (Radionics® Burlington, MA, USA); either a single needle or a clustered probe (Figure 2) depending on tumor size. The aim is to obtain complete ablation of the tumor plus a 1-cm tumor-free margin. The ablative procedure is performed under ultrasound guidance

Figure 2

- A helical contrast CT scan is performed at one to two weeks after the ablative procedure to check for the completeness of ablation. Any residual tumors detected are treated with a repeat session of RFA
- For tumors that are located at the dome of the liver or close to adjacent structures e.g. diaphragm or colon, RFA will be performed by open surgery under general anaesthesia (Figure 3)

Figure 3

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 given by anaesthetists
- Patients can resume a normal diet on the day after RFA and will be discharged if clinical condition is stable
- All patients who underwent RFA will be followed up in the specialist clinic by experienced hepatobiliary surgeons

Complications

- The complication rate is about 7%, and includes liver abscess formation, bleeding and visceral injury
- The possibility of death is about 1%

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

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