Therapeutic approach to hepatocellular carcinoma: a difficult choice

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Therapeutic approach to hepatocellular carcinoma. A difficult choice

In this paper the most important problems regarding diagnosis and treatment of HCC will be discussed in detail by the Authors.
In an analysis of therapeutic options, the methods used over the past decades will be looked at. The conclusion is that choices must always be made in a rational manner and with good sense.

KEY WORDS: Biliary leaks, Cholecystectomy, Minilaparotomy, Mirrizi Syndrome, Videolaparocholecistectomy

Up to 1980 surgical treatment of primary and secondary liver tumours was looked on with respect and dread. Very few surgeons attempted hepatic resection because it was considered very risky due to intraoperative technical difficulties or to a greatly compromised liver function. Perioperative mortality was, in fact, practically unacceptable, exceeding 20-30%.
Secondary tumours were rightly thought to be the expression of an uncontrollable evolution of the disease and a surgical approach was considered irrational over treatment.
Over the last decades improved medical, surgical and anaesthesiologic knowledge, together with considerable progress in technology, have enabled a wider application of new techniques.
The good results achieved with many types of treatment have led to justifiable enthusiasm whilst favouring the appearance of great competition. Even today, the lack of rigid criteria of choice on which patients to submit to new, already experimented methods, means fragmenting case studies making it difficult to reach sufficient numbers for statistical significance.
Based on studies published by various Authors it would appear that the time is ripe for assessing not only the advantages of a given treatment but also its limitations, so as to identify with **rational criteria** which patients should be treated and with which therapeutic technique in order to obtain the best results.
Cholangiocarcinoma often comes to our attention when the parenchyma is already involved and preoperative decision making depends greatly on the surgeon's experience and technical feasibility of the operation.
There are many alternative treatments for malignant disease, especially hepatocellular carcinoma (HCC).
The majority of choice making problems are found when treating cases of HCC due to the continuous flow of new technology over the last decades, some of which have passed the experimental phase and are now justifiably appreciated. This makes the therapeutic choice more complicated and the same disease could, in theory, be treated in completely different ways and by diverse specialists. HCC is treated by surgeons, interventional radiologists and, to a lesser extent, by medical oncologists and radiotherapists.
Surgical choice is conditioned by several factors, many of which categorically exclude resection. Whereas in cases of HCC on healthy liver, surgical limitations are determined by tumour extension, by the number of nodules and the general condition of the patient. In the more frequent cases of HCC on diseased liver, the decision to operate depends on the hepatic function. A patient with Child A cirrhosis can be considered for hepatic resection, but this depends on the entity of parenchymal demolition. It would be reasonable therefore, for the surgeon to request the cardio-green test and/or MEGX and assess the portion of remnant liver once determined the volume. Okamoto has proposed a mathematical formu-

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la based on this assessment that enables to foresee the postoperative mortality risk.
The same considerations can be used for Child B cases, but it is not advisable to operate patients who exceed Pugh 5 classification. Child C patients are categorically excluded. In this case the only surgery possible is liver transplant, following established rules of behaviour. Transplant is possible in patients less than 60-65 years old, with sole neoplastic nodule less than 5 cm, the number of multiple nodules acceptable is 3, of less than 3 cm in diameter.
Surgery is always a very complex technique but there are alternative treatments such as alcoholisation (PEI), thermoablation, cryoablation and chemoembolisation (TACE).
Over the last few years alcoholisation or PEI has lost some of its importance and has been replaced in most cases by thermoablation that can be applied through laparoscopic or transcutaneous route. Thermoablation is a valid alternative to surgery, especially in those cases with multiple or bilateral localisation, when liver function is compromised or the patient's general condition make surgery a dangerous approach. Results of thermoablation are very interesting because they enable 5-year survival comparable to that of surgery with minimal risk to the patient. However, in this field too, objective assessment that takes into account the characteristics of the treated population and makes an objective cost-benefit comparison with surgery is necessary.
Cryoablation is a more complex, more expensive technique and, if its use becomes exasperated, involves noteworthy risk for the patient, such as serious kidney failure following reabsorption of necrotic proteic material. It must also be remembered that the "iceball" can cause serious damage to vascular structures and therefore this method should not be applied in cases with neoplastic nodules near large vessels such as the vena cava or near the confluence of the hepatic veins.
Chemoembolisation (TACE) can always be applied except in cases of neoplastic thrombosis of the vena porta. Slight increase in survival is reported in the literature, but TACE must be used either prior to more invasive surgery or when surgery cannot be carried out for various reasons.
In those cases that for one reason or another one of the abovementioned treatments cannot be applied, the only therapeutic route possible is chemotherapy but, despite numerous attempts, at the moment there are no drugs or association of drugs that significantly modify survival.
We can comprehend the difficulty the treating physician faces when making a choice that does not rely on personal interest or that of the Institution, but is advantageous to the patient.
Many AA propose an association of different treatments to further improve results obtained so far. Nevertheless, my fear is that this behaviour may increase difficulty in rational choice making. Therefore I would suggest to establish, before accessing new therapeutic routes or enriching personal choice, which methods should be used to treat the patients based on serious clinical trials.
In conclusion, without presuming to affirm a **truth,** I believe that in regards to HCC it is now possible to say:
that surgery offers the greatest possible guarantee for Child A cases with single nodule of a size that requires mono or bi-segmentectomy;
that thermoablation is less invasive and permits to achieve the same results as those after surgery of single nodules and has the advantage of also being efficient in cases of multiple nodules of medium-high liver failure;
that cryoablation is a more complex, more expensive and better technique when applied to cases with nodules less than 4cm in diameter;
that PEI is now easily considered a 'preserving' technique even though it should preferably be used on capsulated nodules below 3 cm diameter;
that TACE is to be considered an interlocutaory treatment whilst awaiting transplant or resection or, in diffused cases, also bilateral paucinodular;
chemotherapy or antiextrogen treatment must only be applied in those cases where none of the previously mentioned methods are applicable;
that transplant is indicated only when indications accepted internationally are present: single nodule <5cm or three nodules < 3cm.

Riassunto

Nell'elaborato vengono evidenziate le più importanti problematiche diagnostico-terapeuriche che estesamente saranno poi affrontate in dettaglio dai vari Autori.
Nell'analisi delle possibilità terapeutiche vengono citate le metodiche impiegate nel corso degli ultimi decenni
La conclusione è che deve essere sempre praticata la scelta seguendo i dettami della razionalità e del buon senso.