Plenary lecture

1019
RECTAL CANCER SURGERY—EUROPE LEADS THE WAY

R.J. Heald

There is probably no more important issue in the field of cancer treatment at this time than the relative impact on the outcomes of the modalities in common use. The major renaissance of chemotherapy in the last decade, for example in colorectal cancer, has been based on surgical results which are markedly inferior to those which have been achieved by the best units in various part of the world. Thus the major trial by Krook and Moertel from the NCCTG, which has probably had the greatest impact on cancer treatment of any paper ever written, was based upon surgery practiced across many centres in the United States where the surgery was clearly of an unacceptable standard. Furthermore the premature discontinuation of this trial leaves many authorities with serious doubts about whether the apparent benefits of chemotherapy really represented anything more than prolongation of the tumour free interval rather than the claimed increase in the definitive number of cures. Recent interim results from the Dutch trial in the event showed no difference between treatment and control arms when the study was evaluated after three years. Whilst massive investments continue in chemotherapy trials no public cash has been injected in most countries into refinement of surgical technique and the teaching of such important techniques to specialist surgeons. The work of Hermanek in Germany suggested that whereas a maximum of 20% improvement in outcomes might be achieved by the optimal use of adjuvant therapies *four times* this improvement could be achieved by improvement in surgical technique.

Some progress has however been made in Norway and Sweden and plans are in place for further initiatives in Holland and Finland. The author will present the interim results of surgical workshops undertaken in 13 Scandinavian cities to introduce the defined surgical technique of total mesorectal excision. This is an example of "specimen orientated surgery" where the surgeon gives the highest priority to achieving an intact untorn specimen comprising the whole of the visceral mesentery of the hind gut. This includes Denonvillier's fascia on the front and the whole specimen is as far as possible covered with areolar tissue which intervenes between the mesorectum and its external relations—prostate, vesicles, vagina, inferior hypogastric nerve plexuses, piriformis, levatoris ani, etc. In Basingstoke in England the use of this technique over 17 years has reduced local recurrence rates to 3% in "curative" anterior resections (the best group) and to an overall local recurrence rate for every person undergoing surgery of any kind of 7%. Data are also presented to show that there is a substantial improvement in the latter part of the series so that locally recurrent disease appears to be capable of being virtually eliminated by the combination of selective pre-operative radiotherapy in a small percentage of locally advanced cases and obsessional pre-occupation with the technical achievement of good TME specimens. If these figures can be reproduced as a result of the workshops then it becomes clear that the whole range of adjuvant therapy protocols must be fundamentally reappraised and their role probably reduced to a more selective group of patients with a greater chance of benefit.

Award lecture

1020
DCIS OF THE BREAST, THE CHALLENGE TO FIND THE RIGHT TREATMENT. BIOLOGY AND CHRONOLOGY

J.A. van Dongen
The Netherlands Cancer Institute, Amsterdam, The Netherlands

With the improvements of mammography and the broad introduction of screening in countries with a high breast cancer incidence the number of cases of *in situ* breast cancer has increased to 15% of all detected breast cancers. To find the right treatment for this disease is a major challenge in our daily medical practice. A good understanding of the biology is needed to find the optimal therapeutic measures; for DCIS still many uncertainties exist. It is difficult to make an estimate of the risk of change into invasive disease and also the time frame for this to happen is difficult to predict. The growth rate of the non-invasive lesions is not known and also the growth pattern is matter of discussion. It is thought now that the majority of DCIS is unicentric but multifocality, representing arborisation of the tumour is very frequently seen. It might be so that all these mentioned aspects are different for different subgroups of DCIS. The traditional subdivision into comedo, solid, cribriform and micropapillary types are replaced by systems based upon variables such as the presence of necrosis and the architecture of the lesion. Also the use of biological determinants has been suggested. The modern subdivisions designed by the EORTC/DCIS pathology subcommittee and those developed in Nottingham and used by the Silverstein group, have in common that these systems should divide DCIS into categories with clearly different biologic behaviour.

The therapy poses specific ethical problems. Complete removal of the lesion gives a 100% cure rate. A total mastectomy should cure all patients with DCIS. The problem is that it is difficult to recommend mastectomy for non-invasive lesions while at the same time offering breast conserving therapy for invasive cancers. All data suggests, however, that with less than total mastectomy, the local recurrence rate ranges between 10 and 60% (depending on follow-up time, technique). Half of the recurrences are invasive and part of these patients will die of the disease. The addition of radiotherapy reduces the local recurrence rate but still a considerable number of recurrences are seen. All discussions are focused on the definition of a "safe margin"; technically difficult for surgeons and pathologists. When very wide margins are certain, the addition of radiotherapy might not be necessary.

A major question is if indeed the new subclassifications are helpful in identifying the groups with high risk of progression or in finding groups where the addition of radiotherapy is not helpful. We need to be very cautious; it might be so that with long follow-up "early" results will change. Only patientgroups with standard therapy for all DCIS cases can give answer to such questions. Data from Amsterdam and from the EORTC study will be discussed in an attempt to bring some light in these confusing problems.