EXTENSION OF CERVICAL CANCER TO THE SUPERFICIAL INGUINAL LYMPH NODES

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The possibility of extension of cervical cancer to the superficial inguinal lymph nodes usually passes unrecognized in standard textbooks on gynaecology, and even the most recent monographs on cervical cancer merely make passing reference to such a possibility in advanced cases. None attempt an estimate of frequency of this complication in their live patients, and the incidence reported in necropsy studies is very variable.

During a phase of special interest in the accuracy of execution of necropsies I formed the impression that spread to the superficial inguinal lymph nodes occurred in a higher percentage of cases than was currently thought to be the case. This stimulated the present study in which superficial inguinal lymph node biopsies were taken as a routine procedure from all patients suffering from cervical cancer before administering treatment, with the object in view of ascertaining the incidence and possible significance of this direction of spread.

DETAILS OF THE INVESTIGATION

The series consists of 591 patients—subsequently proven to have cervical cancer on histological examination of biopsy specimens taken from their cervices. A clinical decision as to whether the superficial inguinal lymph nodes were benign or malignant was made in each case before taking samples for biopsy from superficial inguinal lymph nodes under anaesthesia, and proceeding to perform the remainder of the routine investigations of patients suspected of having cervical cancer. These investigations included clinical assessment of the stage of the growth, biopsy of the cervix, cystoscopy, proctoscopy, and in many instances the biopsy of tissue taken from the bladder and rectum.

RESULTS

Among the patients assessed clinically as having stage I cervical cancer, malignant spread to the superficial inguinal lymph nodes was not found (0 out of 36 cases); but malignant superficial inguinal lymph nodes were found in 5·1% of stage II growths (7 out of 136 cases); in 5·2% of stage III growths (10 out of 193 cases) and in 14·1% of stage IV growths (32 out of 226 cases).

Malignant superficial inguinal lymph nodes were discovered on the right side in 35 instances, the left side in 47 instances, and there was bilateral carcinomatous involvement in 28 instances.

The 'clinical' accuracy of deciding whether the superficial inguinal lymph nodes were benign or malignant was also assessed. In the group of 49 cases with malignant superficial lymph nodes they were regarded as 'clinically' benign in 30% of cases (15 instances). Among the 370 cases with stage III and stage IV growths, in whom the lymph nodes were proved to be benign on histological examination, a previous 'clinical' diagnosis of malignant inguinal lymph nodes had been made in 13% of cases (58 instances). The error was greatest in stage IV growths.

It is important to appreciate that no inguinal lymph nodes whatever were palpable clinically in some fat patients until the inguinal lymph nodes were explored digitally through overlying skin incisions, and histological examination of the lymph nodes discovered in this way proved them to be malignant in 2 instances.

Biopsy of the superficial inguinal lymph nodes did not predispose to subsequent malignant ulceration in the groin, even when the inguinal lymph nodes were found to be malignant. Paradoxically the single case which presented with recurrent cancer ulcerating extensively in the left groin (Fig. 1) was a case omitted from the series, because biopsy on a superficial inguinal lymph node was performed only on the 'contralateral' side. Usually patients who died of cervical cancer did not experience a pronounced increase in the size of inguinal lymph nodes which had been established to be malignant.

The extent of spread of cervical cancer down the vaginal wall had a pronounced influence upon the likelihood of spread to the superficial inguinal lymph nodes (Table I); thus, when less than one-third of the vagina was involved,

the incidence of spread to the superficial inguinal lymph nodes was 2·9% (2 out of 70 cases), when between one-third and two-thirds of the vagina was involved the incidence rose to 9% (36 out of 396 cases), and when more than two-thirds of the vagina was involved by carcinoma the incidence rose to 36·7% (11 out of 30 cases).

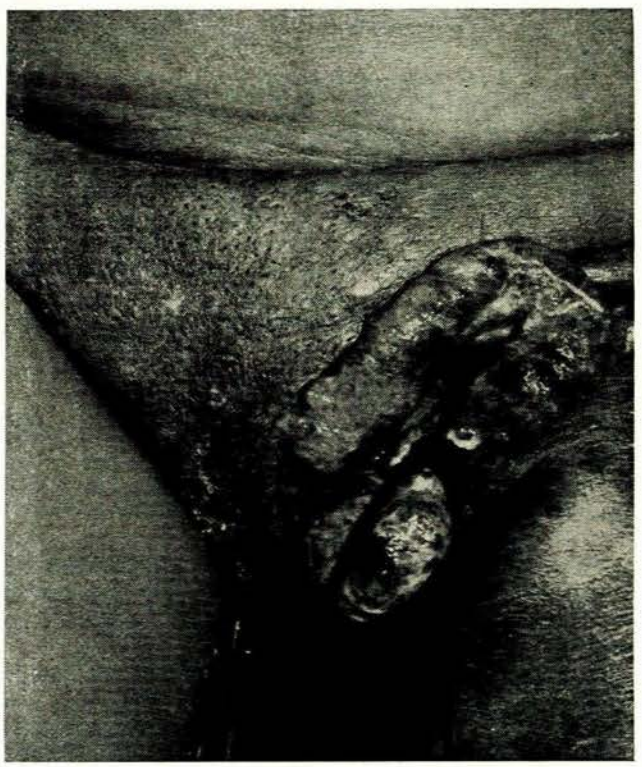

Fig. 1. Malignant ulceration of the superficial inguinal lymph nodes from cervical cancer. No preliminary biopsy was taken.

TABLE I. THE RELATION OF INVOLVEMENT OF VAGINAL WALL TO SPREAD OF CERVICAL CANCER TO SUPERFICIAL INGUINAL NODES

	Malignant extension down the vaginal wall					
	Less than ⅓		*⅓ - ⅔*		*More than ⅔*	
Stage	*Malig.*	*Benign*	*Malig.*	*Benign*	*Malig.*	*Benign*
I	1	35	6	95	—	—
II	1	28	9	151	—	3
III	—	7	21	150	11	27

Among patients in whom there was histological proof of malignant invasion of the bladder from cervical cancer the superficial inguinal lymph nodes were malignant in 13·5% (6 out of 44) of cases.*

In 78 patients in whom the cystoscopic diagnosis of malignant extension to the bladder was made, but in whom the bladder biopsies appeared benign histologically, the incidence of superficial malignant inguinal lymph nodes was only 2·6% (2 out of 78 cases).

Of the 49 patients with malignant superficial inguinal lymph nodes 23 are known to be dead, and of the remaining 26 only 1 is known to have survived (20 months to date). 78% of the 23 patients whose death is established died within 6 months and all died within 11 months.

*26 patients with malignant inguinal lymph nodes did not have bladder biopsies.

COMMENT

In assessing the importance of these findings one must not lose sight of the fact that this study of cervical cancer was undertaken upon patients suffering from a more advanced stage of the disease than is usually found in communities whose standard of health education is high. Yet the fact that the incidence of extension to the superficial inguinal lymph nodes remained almost unaltered whether the growth was assessed as stage II or stage III cancer, suggests the possibility that the diagnosis of malignant extension to the side wall of the pelvis was incorrect and that the fixation was merely inflammatory. If this impression (for which I have found support on a number of occasions at laparotomy) is correct, the number of stage II growths presented in this study becomes considerably greater.

On the other hand, I submit that the practical significance of my findings relates not only to many areas of the world where the diagnosis of cervical cancer is still made at a comparatively late stage of the disease, but anywhere in the world where surgery is contemplated upon a carcinoma which has spread beyond the cervix. The desirability of performing preliminary biopsies on superficial inguinal lymph nodes exists especially in those cases in which exenteration is contemplated, for the discovery of malignant inguinal nodes, which portends such a speedy demise, may spare all concerned the strain of a major surgical undertaking.

SUMMARY

1. The frequency of spread of cervical cancer to the superficial inguinal lymph nodes was assessed in this study of 591 cases.

2. Malignant spread to the superficial inguinal lymph nodes did not occur when a clinical assessment of stage I spread had been made, but when the clinical staging was II or III the likelihood of spread rose to 5·1 and 5·2% respectively. In stage IV growths the superficial inguinal lymph nodes were malignant in 14·1% of cases.

3. The need to base the diagnosis upon the biopsy of the superficial inguinal lymph nodes, as opposed to a clinical appraisal, was proved by the discovery of an error rate of 30% in clinical diagnosis when the lymph nodes were malignant and 13% when they were benign.

4. Biopsy of the superficial inguinal lymph nodes did not predispose to subsequent malignant ulceration in the groin, even if the nodes were malignant at the time of biopsy.

5. The extent of spread of the carcinoma down the vagina favoured spread to the superficial inguinal lymph nodes, and similarly a 5-fold increased likelihood of involvement was encountered when there had been malignant invasion of the bladder.

6. The life expectancy of patients in whom cervical cancer has spread to the superficial inguinal lymph nodes is short.

7. The important recommendation which therefore stems from my study is that preliminary histological examination of superficial inguinal lymph nodes should be performed upon all patients whose carcinoma has spread much beyond the cervix before reaching a final decision to embark upon surgery for cervical cancer.

I wish to record my gratitude to my registrars for taking many of the specimens for biopsy in the latter part of this study, and to my technical assistants, Messrs. K. Birch and M. Silburn, for gleaning and checking the results reported in this study.

May I also thank Dr. P. Nupen, Superintendent of King Edward VIII Hospital, for the many indirect ways in which he helped my study.