ORIGINAL ARTICLES

An Audit of the Quality of Endometrial Cancer Care in a Specialised Unit

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Abstract

Background
Endometrial cancer is the 5th most common female cancer in Scotland and though cure rates are good, 25% of women still die of their disease. Staging has been shown to be poorly performed in Scotland-wide audit and inadequate staging is a predictor of worse outcome. Only 12% of women with endometrial cancer in Scotland are operated upon by a specialist gynaecological oncologist.

Aims
To determine if the quality of staging information in endometrial cancer is improved in a region where all cases are managed by specialist gynaecological oncologists.

Methods
All 108 women diagnosed and treated with endometrial cancer in Grampian in 2002 and 2003 had a retrospective case note assessment of the completeness of staging information. This was compared to previously published Scottish results.

Results
Completeness of staging was high. The International Federation of Gynecology and Obstetrics (FIGO) stage was available in 100% of women. Chest X Ray was performed in 85% and peritoneal cytology in 93%. Pelvic lymphadenectomy was performed in 28%. All these results were significantly better than in the Scottish audit.

Conclusion
Centralisation of women with endometrial cancer results in accurate staging information. However it is not yet known what effect this may have on outcome.

Key Words
Endometrial cancer, staging, specialisation.

Introduction

Endometrial cancer is the second most common gynaecological malignancy and the incidence is increasing. Figures from Information Services Division (ISD) show a 55% increase in incidence in the past 10 years which has contributed to the overall increase in female cancers[1]. Because endometrial cancer has a good overall cure rate and is thought to be easily cured, it has received less attention than the other gynaecological malignancies[2]. Survival and cure rates are high for those women with early stage, low risk disease but are significantly worse for those with high risk disease (high risk tumour histology and advanced stage). Data from the ISD show that 24% of women with endometrial cancer in Scotland die of their disease[1].

In most geographical areas the majority of women are managed by generalist gynaecologists rather than care being centralised to sub-speciality gynaecological oncology units. This was the case in Scotland when a large national audit was performed and published. In this series of 781 women with endometrial cancer it was found that essential information for accurate staging was missing in a large proportion of cases [3]. In this cohort only 12% of women undergoing surgery for endometrial cancer were operated on by a specialist gynaecological oncologist.

The International Federation of Gynecology and Obstetrics (FIGO) staging classification for endometrial cancer is mainly surgical[4]. It relies upon excluding lung metastases with a chest x-ray (CXR) and on a number of surgico-pathological findings. (see Table I). Standard operative management is to perform a total abdominal hysterectomy with removal of both tubes and ovaries. Pelvic or para-aortic lymphadenectomy adds to staging but was only done in 4% of cases in Scotland during the above audit period[3].

Accurate staging is important for the following reasons: it allows the prognosis for that individual patient to be determined, it allows for selection of high risk women to be offered post operative adjuvant radiotherapy (and those at low risk to avoid radiotherapy). The Scottish wide study showed better staging in women operated on by specialist gynaecological oncologists and worse survival in those who were poorly staged[3].

Table I Staging information required in endometrial cancer

Essential
CXR
Cytology of peritoneal washings
Inspection / palpation of uterus ovaries pelvic and para-aortic lymph nodes and liver
Histological staging, depth of myometrial invasion, involvement of cervix,
involvement of adnexae.
Histological grading: tumour type and differentiation
Additional
Lymph node assessment: lymphadenectomy or sampling

In the Grampian region of Scotland it has been policy since 1998 for all patients with known endometrial cancer to be managed by the sub-speciality gynaecological oncology unit. It is the unit policy to enrol women into the Medical Research Council - A Study of the Treatment of Endometrial Cancer (MRC ASTEC) trial where possible. This is a randomised trial comparing routine hysterectomy and removal of both ovaries alone to the addition of pelvic lymphadenectomy. In women not in the ASTEC trial lymphadenectomy was considered if surgically feasible in women with Grade 3 or other high risk tumour types.

Following the publication of the Scottish data on management of endometrial cancer, we carried out an audit to determine if concentrated sub-speciality management improved the collection of staging information.

Materials and methods

All women from Grampian, Orkney or Shetland are entered into the Grampian gynaecological oncology database following any cytology or histology result suggesting a gynaecological malignancy irrespective of the source of the result.

All women who were resident in Grampian, Orkney or Shetland and were diagnosed with endometrial cancer between 1.1.2002 and 31.12 2003 were identified from the database. Inclusion and external criteria were identical to the Scottish study [3]. The case notes were reviewed and data retrieved in a systematic manner on the method of treatment, pre-operative staging information, intra-operative staging information and histo-pathological results (Table II). Any staging results not accessible from the case notes or the pathology or radiology computer systems were deemed to not have been performed.

As in the Scottish study the data are presented as the proportion of results available in those women who had undergone a hysterectomy. The information was entered into an Access database. Though there was no power study performed and it is recognised that the study population may not be directly comparable to the Crawford study The results are compared where appropriate to the Scottish wide data using a chi-squared test.

Table II Results

	Grampian n =86		Scotland n = 703		p
	n	%	n	%	
CXR	73	85%	N/A		
Peritoneal washings taken at hysterectomy	80	93%	309	44.6%	<0.05
Histological tumour type, invasion and grade	86	100%	623	88.6%	<0.05
Uterine description	86	100%	N/A		
Ovaries description	86	100%	N/A		
Lymph nodes description	69	80%	N/A		
Lymphadenectomy	24	28%	28	4%	<0.05
Lymph node sampling	8	9%	N/A		
FIGO stage	86	100%	255	36.4%	<0.05

Results

During the years of 2002 and 2003, 111 women were identified from the database as being diagnosed with endometrial cancer and managed in the Grampian Region of Scotland. Three were then excluded (1 Uterine sarcoma incorrectly classified and 2 women operated on elsewhere) leaving 108 evaluable women. Twenty-two women were treated with initial radiotherapy and / or hormonal treatment, 12 because of severe co-morbidity and 10 because of advanced inoperable disease. This left 86 (79%) who underwent primary hysterectomy.

Staging information is shown in Table II. All parameters were collected significantly more frequently than in the Scottish study. In particular a pelvic lymphadenectomy was performed in 28% of women in Grampian compared to 4% in Scotland.

Discussion

It has to be remembered that time has passed both since the period studied in the Crawford paper (1996-97) and the publication of that report (2002)[3]. It is to be hoped that management of women with endometrial cancer has improved generally in that time. More complete staging was collected in this series although the accuracy was not 100% for all parameters. Two possible reasons for this are: if the woman was referred from another hospital and a CXR was done at the original hospital they were deemed not to have had it done unless the result was available in the Aberdeen records. There were also a few women in whom the diagnosis of endometrial cancer was either unsuspected or unconfirmed pre-operatively which accounts for some of the missing peritoneal cytology.

The proportion of women who did not receive an initial hysterectomy (21%) is higher than the results of the Scottish study which found 10% were not operated upon[3]. This may reflect the multi-disciplinary team identifying obviously inoperable patients before subjecting them to needless surgery or perhaps higher case ascertainment due to a dedicated gynaecological pathologist identifying endometrial cancer in women with advanced malignancy of uncertain site. It includes 4 women who subsequently had a hysterectomy following reduction of parametrial disease with radiotherapy.

It remains to be seen if accurate staging and specialist referral does improve survival. The curative role of lymphadenectomy in addition to the standard treatment of total hysterectomy and bilateral salpingo-oophorectomy is the subject of the MRCA trial as the therapeutic role is uncertain. The role of adjuvant radiotherapy is also unclear. It improves local control of disease but has not been shown to improve survival [5] and again is being studied as part of the ASTEC trial. If either of these modalities improves survival then accurate staging will not only be of prognostic value, but will allow correct selection of patients to receive adjuvant treatment in terms of lymphadenectomy or radiotherapy.

Despite our results more can still be done. Efforts need to be made to ensure that a CXR is done in 100% of women and it would be wise to collect peritoneal cytology in all women with a possible diagnosis of endometrial cancer such as those undergoing hysterectomy for endometrial hyperplasia or undiagnosed post-menopausal bleeding.

Centralisation of surgery for endometrial cancer leads to more accurate and uniform staging. If this leads to improved survival then this should be the norm across Scotland, but the current manpower shortage of gynaecological oncologists make this impractical in the short term.

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