

ACCURACY OF CLINICAL EXAMINATION IN ASSESSING PARAMETRIUM IN CERVICAL CARCINOMA

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ABSTRACT: Carcinoma cervix (ca cervix) in early stages can be managed either by surgery or radiation. Surgery has an upper hand in most, especially young ones. Parametrial involvement is one of the most important factor which affect therapeutic choice. Clinical examination was the time tested method for parametrial assessment. Recently use of imaging has started to take an upper hand, which might affect the treatment. **AIMS:** To find out clinical accuracy in assessing parametrium in early stage ca cervix and to compare with efficacy of CT (computed tomography) scan. **MATERIALS AND METHODS:** 35 cases of early stage carcinoma cervix who underwent Werthiem's hysterectomy in a cancer research Centre in Kerala were included. All underwent CT scan pre operatively. Accuracy was assessed according to histopathology report. **RESULTS AND CONCLUSION:** Of the 35 cases without any clinically detectable parametrial involvement only 3 cases had actual parametrial involvement as per histopathology, with a diagnostic accuracy of 91.42%. CT scan even though had a 100% negative predictive value, had only 16.6 % positive predictive value. Hence clinical assessment of parametrium by an experienced person is superior to CT scan and should be relayed upon in case of disparity between the two.

KEYWORDS: Parametrium, Wertheim's hysterectomy, Clinical accuracy.

INTRODUCTION: Carcinoma cervix (ca cervix) is the most common gynaecological malignancy in India. In early stages it can be treated by surgery or chemo radiation.⁽¹⁾ Classically it has been said that up to stage 2a surgery can be carried out as the primary modality. Since chances of post-operative radiation is high with bulky lesions in our institute surgery is limited up to stage 1 B1. Precise knowledge of parametrial extension affect therapeutic distinction between surgery and radiotherapy.⁽²⁾ FIGO (International federation of obstetrics and gynaecology) recommends clinical examination in staging ca cervix. All though CT (computed tomography) is not a component of FIGO staging it is obtained in most patients with ca cervix, but many studies have shown that CT is not accurate in parametrial assessment.⁽¹⁾ Hence injudicious use of CT scan without taking in to account clinical judgement can adversely influence your therapeutic decision.

AIMS:

- 1) To assess accuracy of clinical examination in assessing parametrium in early stage ca cervix.
- 2) Assess efficacy of CT scan (commonly available imaging) in assessing parametrium.

MATERIALS AND METHODS: 35 cases of early stage ca cervix who underwent Wertheim's hysterectomy in our institute between January 2011- December 2013 were included. All cases were examined by oncosurgen/ senior gynaecologist and was found to have no parametrial

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involvement. All underwent pre-operative CT scan (120 slice). All were followed up with histopathology report.

RESULTS:

Age group	Number (35)
45 - 49	8
50 - 54	21
55 - 59	4
60 and above	2

Table 1: Age Wise Distribution

In this study most cases are in the perimenopausal age group and mean age group was 51.5% (Table 1).

The chance of parametrial involvement in early stage ca cervix was found to be 8.5% (Table 2).

PARAMETRIAL INVOLVEMENT	NUMBER
Present	3
Absent	32

Table 2: Parametrial Involvement (As Per Histopathology)

This shows a very minimal chance of parametrial involvement in early stages of cervical malignancy. Of the 35 cases without clinically detectable parametrial involvement 32 cases had no parametrial involvement as per final histopathology also, which shows a diagnostic accuracy of 91.4 %.

In this 35 cases 18 showed parametrial involvement in CT out of which 15 turned out to be false positive (50% specificity and 16.6% positive predictive value). But at the same time it has 100% sensitivity and negative predictive value. (TABLE 3)

CT scan	HPR positive	HPR negative
CT positive - 18	3	15
CT negative - 17	0	17

Table 3: Ct Scan & Parametrium

PPV - 16.6%.

NPV – 100%.

Sensitivity – 100%.

Specificity - 50%.

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DISCUSSION: Mean age group in our study shows propensity of this tumour to affect younger age groups, where surgery has definite advantage especially with regard to long term complications. As per clinical assessment alone all these were candidates for surgical management. If we had gone by CT scan 50% of cases would have to have had radiation and its sequel.

Parametrial invasion is a significant factor influencing therapeutic choice. Chance of parametrial involvement in early stage ca cervix as per this study is 8.5%, which correlates with other studies. According to Steed H et al parametrial involvement in early stages is 5% only.⁽³⁾ No parametrial involvement was seen in ca cervix < 20mm as per Kamimori T et al.⁽⁴⁾

In this study clinical assessment when done by experienced persons is found to have very good accuracy which justifies FIGO staging which does not consider CT and MRI mandatory.

Many studies have shown inaccuracy of CT in assessing parametrium. Walsh J W and Goplerud DR says CT is inaccurate in differentiating stage 1b and 2b lesions.⁽⁵⁾ Improved tumour delineation by imaging contributes to treatment decisions and increased precision of targeted radiation.⁽¹⁾ But its injudicious use can have adverse outcomes. There was poor agreement between clinical and CT staging of ca cervix, but CT had 100% negative predictive value to exclude bladder and bowel involvement.⁽⁶⁾ In this study also CT scan was found to have good negative predictive value, but positive predictive value and specificity was less. This raises questions to its routine use in early ca cervix.

Different explanations are given for inaccuracy of imaging in assessing parametrium. One such reason is insignificant contrast between local tumour and parametrium. Others being misinterpretation of parametrial vessels and ligaments, presence of parametritis.⁽⁷⁾

MRI has much better accuracy, but cost and limited availability are hindering factors. According to Sironi et al, MRI has an accuracy of 88%, sensitivity of 100% and specificity of 80% in assessing parametrium.⁽²⁾ Another study from Giuliano Rignon et al also shows specificity of 83.6%. But they also say that MRI is much better for myometrial and endometrial involvement and is not sensitive enough to replace histopathology.⁽⁸⁾ In some studies MRI has shown better accuracy than clinical examination.⁽⁹⁾

LIMITATIONS: Since MRI has definite advantage over CT, comparison would have been ideal between MRI and clinical examination. But in that time frame CT was the commonly applied imaging modality. Cost was another consideration. Currently another study is going on with this aim.

CONCLUSION: Clinical assessment of parametrium by an experienced person is more accurate than CT scan in early stages of carcinoma cervix. CT scan should be judiciously used in these cases and should not adversely affect the therapeutic choice.

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