A CRICKETING APPROACH TO ABDOMINAL EXAMINATIONS. K. Mohapatra¹, S. Dhanuka², R. N. Guru³**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: Abdomen is called as Pandora's Box because unexpected findings may come out of expected ones. Abdominal examination is the key in arriving at a diagnosis, although a little history is important. Beginners to abdominal examination often are confused to the Inspection, Palpation, Percussion and Auscultation approach to abdomen and many times they miss extra abdominal causes of abdominal complaints. Hence a metaphoric cricketing approach is mentioned in this article combining the same inspection, palpation, percussion and auscultation tools in a playful mood so that it becomes interesting to the learner to have a concept of abdominal examination in arriving at a diagnosis.

KEYWORDS: Cricketing approach, abdominal examination, clinical skills.

INTRODUCTION: Now days the game of cricket is very popular among students. Metaphorically abdomen may be compared to a cricket field and the surgeon a cricketer, playing cricket over the abdomen for winning the championship by arriving at a diagnosis. A good surgeon should apply cricketing attitude to score maximum runs in this part of the abdominal examination.

How abdomen is a cricket field?

It is helpful when recording in notes or communicating information to colleagues to think of the abdomen as divided into regions.⁽²⁾ Let us imagine the abdomen as a cricket field having a pitch, crease lines with stumps and boundary.

One side stump is xiphoid process and the other side stump is pubic symphysis.

The pitch connecting the stumps at the two sides are the pararectal lines of both sides.

The two crease lines are Transpyloric line (TPL) at the xiphoid stump side and Transtubercular line (TTL) at the symphysis pubis stump side.

The Transpyloric line TPL connects the tip of 9th costal cartilage of both sides. Here it may be mentioned that the 10th costal cartilage is the last costal cartilage because 11th and 12th ribs are floating ribs without any costal cartilage connecting to costal margin.

The Transtubercular line connects the highest point of iliac crest of both sides which lies 2" (5cm) behind the anterior superior iliac spine (ASIS)

With pitch lines, crease line and stumps the field is ready only to be defined by the boundary of the field.

The boundary extends from supraclavicular area above to the groin crease below and flanks on both the sides including the vertebral column on the back. So now the field is ready for the surgeon to play the game of cricket to score high runs for diagnosis.

It is well known in cricket that when the ball (our objective clinical finding) crosses the boundary, without touching the field, the cricketer gets 6 runs. If the ball crosses the boundary

through the field he gets 4 runs. If the ball remains in the field cricketer may get 1 run, 2 run or no run.

How a surgeon scores run over the abdomen?

In the initial examination of abdomen opening batsman always wants to score 6 runs in one ball. That should be the objective of every surgeon to score 6 runs on every positive finding in the boundary line of abdomen as described earlier.

So the 6 "6" runs a surgeon must score are, by palpating:

1. Supraclavicular lymphnode for positive Troisier's sign to exclude intra abdominal malignancy of stomach, pancreas, testis.
2. External hernia (presence or absence) for abdominal pain, distension of obstruction.
3. Examination of spine for deformity, tenderness causing abdominal pain due to vertebral root pain.
4. Femoral pulse, for abdominal aortic/ mesenteric arterial pathology including aneurysm, atherosclerotic occlusion causing ischemic/ thrombotic pain in old age.
5. Digital Rectal Examination comes at the periphery of abdominal examination, to exclude rectal, colonic, appendicular, intestinal, pelvic and peritoneal pathology of abdominal pain.
6. External genitalia (Testicular examination) of a male because testis is an abdominal organ descended to scrotum. Absence of testis may present with abdominal symptoms or pathological testis including tumor, torsion or inflammation may cause abdominal pain and swelling, as testis drains to para aortic nodes and visceral pain of testis is referred to the T10 segment near umbilicus.

Now coming to score runs inside the field of abdomen is to score for the following points which can be easily remembered by the mnemonic – L+U+M+P+S and a Lump Where:

L - Liver examination- if enlarged/not enlarged; with its qualification runs are scored.

U - State of Umbilicus is also significant finding for umbilical tumors, hernias, infection and fistula – adds to the score

M- Moving dullness; indicates free fluid in the abdomen its presence/absence is a scored run

P- Palpating further for local rise of temperature, guarding, rigidity, tenderness and rebound tenderness(release sign; Blumberg's sign) – sudden complete withdrawal of the hand after gentle deep palpation produces pain⁽³⁾ - are the points of scoring runs known to all clinicians.

S- Splenic examination; The spleen must be near two times larger than its normal size to be detected by clinical examination.⁽¹⁾ Whether palpable or not is also a scoring run.

These runs must not be forgotten and should be obtained in every abdominal examination.

After the L+U+M+P+S scoring, the final scoring comes from finding a lump in any of the 9 regions of the abdomen namely Epigastrium, Rt. Hypochondrium, Lt. hypochondrium, Umbilical, Rt. Lumbar, Lt. Lumbar, Rt. iliac and Lt. iliac, Hypogastrium. Finally the surgeon calculates his runs. A good surgeon who scores all the runs can win the match to reach at the diagnosis of a disease.

RESULT: This innovative method of Cricketing approach of abdominal examination can be learnt and applied by undergraduates, postgraduates and practicing clinicians, to improve upon their diagnostic ability.

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CONCLUSION: Thus the cricketing approach to abdomen may help some of our best brains in the profession and provide an easy and fun way to learn and remember the abdominal examination.

Fig. 1

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AUTHORS:

1. S. K. Mohapatra
2. S. Dhanuka
3. R. N. Guru

PARTICULARS OF CONTRIBUTORS:

1. Professor and HOD, Department of General Surgery, V.S.S. Medical College, Burla.
2. Post Graduate Student, Department of General Surgery, V.S.S. Medical College, Burla.
3. Post Graduate Student, Department of General Surgery, V.S.S. Medical College, Burla.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. S. Dhanuka,
Krishna Niwas, Sourav Vihar,
Near Binayak Hospital, Burla,
Sambalpur – 768018, Odisha, India.
Email: drdhanuka@gmail.com

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