ISSN: 0976-3031

Available Online at http://www.recentscientific.com

CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research
Vol. 9, Issue, 1(D), pp. 23160-23162, January, 2018

International Journal of Recent Scientific Research

DOI: 10.24327/IJRSR

Research Article

USG EVALUATIONS OF ENLARGED MESENTERIC LYMPHNODES (EMLN) IN CHILDREN AND ITS CLINICAL MANIFESTATIONS

Rudra Narayan Dash and Gitanjali Satpathy

Kalinga Institute of Medical Sciences (KIMS) KIIT University, Bhubaneswar, Odisha

DOI: http://dx.doi.org/10.24327/ijrsr.2018.0901.1409

ARTICLE INFO

Article History:

Received 12th October, 2017
Received in revised form 21st November, 2017
Accepted 05th December, 2017
Published online 28th January, 2018

Key Words:

Children, Lymph nodes, Mesentery, Pain abdomen, mimic acute appendicitis

ABSTRACT

Abdominal pain is a common problem nowadays in children 01 years to 10 years. Out of many causes, the appendicitis and Enlarged Mesentropic Lymphnodes are main causes. However, Enlarged Mesentropic Lymphnodes (EMLN) is the main cause of abdominal pain in children. For this purpose, we have taken the USG Evaluation study of EMLN in children. In our study we have taken 300 children who suffered from abdominal pain, vomiting, fever and diarrhea. Out of these, 192 children were found to have EMLN which mimic acute appendicitis. Children of the age group of 03 to 10 years were having EMLN in more numbers.s USG plays a vital role to diagnose EMLN in children which is a safe diagnostic modality to differentiate between EMLN and appendicitis especially in the children with age group of 03 to 10 years

INTRODUCTION

Abdominal pain is a very common problem (complain) in the paediatric age group (1 year to 10 year). The children who come with complains of pain abdomen, vomiting, nausea, fever & diarrhoea is a challenge to the clinicians as well as to the paediatrician to diagnose. It is observed that some of them can not conclude weather to treat this type patient conservatively or to send to surgeon for surgery. Looking to the scenario day to day practice, USG plays a vital role to decide what type disease the children are suffering and guide the clinicians to take a decision.

The following are the common causes for pain abdomen in children

a) Acute appendicitis.
b) Mesenteric adenitis.
c) Intussusception.
d) Meckel's diverticulum & ovarian torsion (which are rare presentation).

Objectives

Our aim of study is to evaluate the EMLN in children who come with the clinical manifestations of pain abdomen, vomiting, fever, diarrhoea, & some of them having many symptoms all together, because mesenteric adenitis mimic with acute appendicitis where many clinicians don't give importance or otherwise neglect.

MATERIALS and METHOD

In our study we have selected 300 children who attended our Radio-diagnosis Department of KIMS & some diagnostic centres at Bhubaneswar for USG examination with complains of pain abdomen, vomiting, diarrhoea, fever, fever + pain abdomen + vomiting. We selected the children age group of 1 year to 10 year who were referred by paediatrician, physician & other related clinicians.

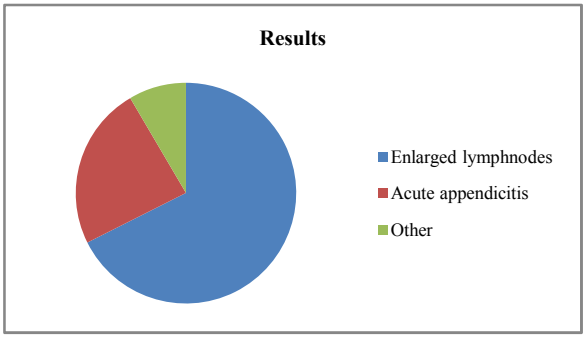
We have included both boys & girls in our study. Out of 300 children 180 were boys & 120 were girls. The period of study was from January 2015 to January 2017 (Two years of study). The clinical course & history of children were also analysed basing of the criteria of peroneal diameter of the lymphnode was 5 mm in short axis & 10 mm in long axis or more with 3 or more enlarged such type of lymphnodes. In our study we have taken the children who were having EMLN (192) during our USG examination, excluding other causes of pain abdomen.

Corresponding author:* **Rudra Narayan Dash
Kalinga Institute of Medical Sciences (KIMS) KIIT University, Bhubaneswar, Odisha

RESULTS

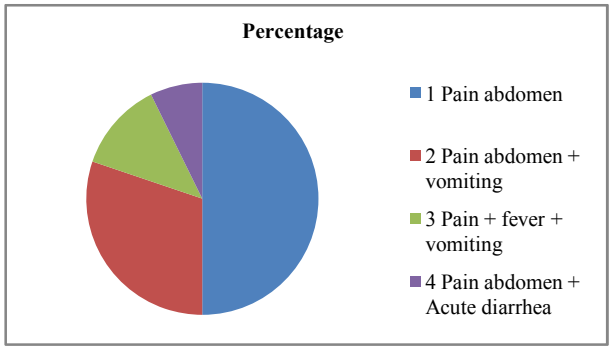
Types of findings by USG

1. Enlarged lymphnodes -192
2. Acute appendicitis – 68
3. Other – 24



B. USG findings of EMLN in children with clinical symptoms which were correlated.

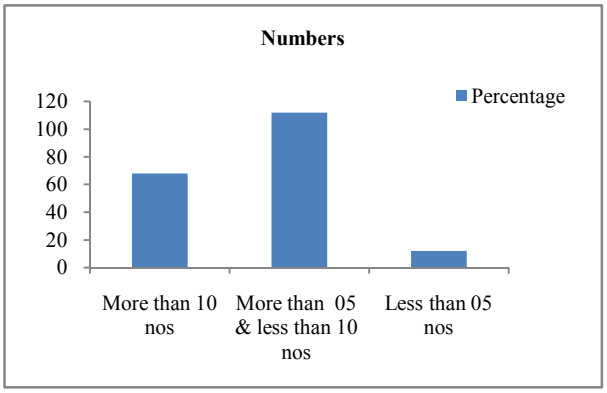
SL No	Symptoms	Number	Percentage
1	Pain abdomen	96	48.97
2	Pain abdomen + vomiting	58	29.59
3	Pain + fever + vomiting	24	12.24
4	Pain abdomen + Acute diarrhea	14	7.14



Types of enlarged nodes

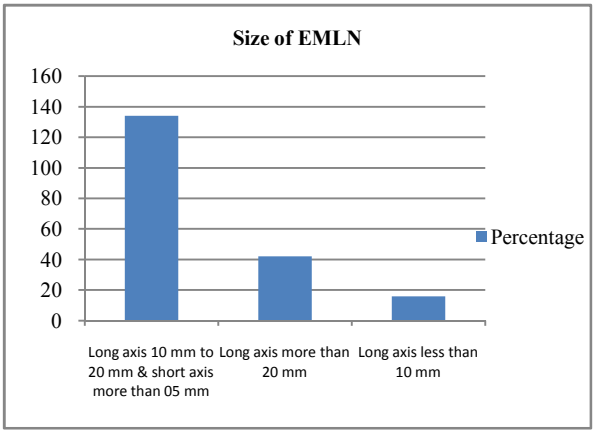
Numbers

- More than 10 nos - 68
- More than 05 & less than 10 nos -112
- Less than 05 nos – 12



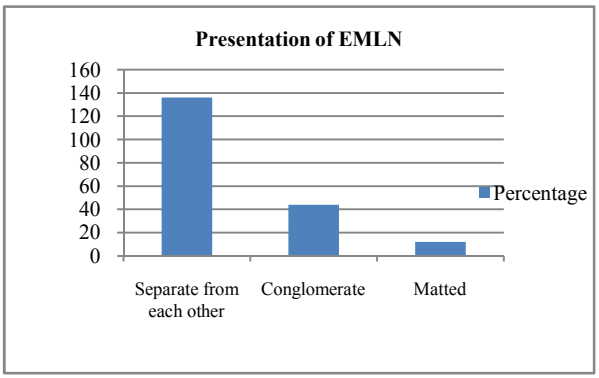
Size of EMLN

- Long axis 10 mm to 20 mm & short axis more than 05 mm – 134
- Long axis more than 20 mm – 42
- Long axis less than 10 mm – 16



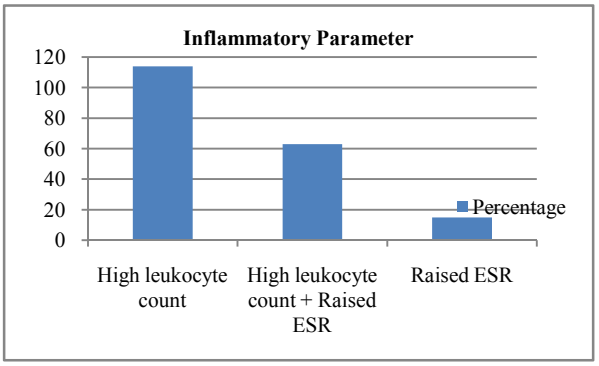
Presentation of EMLN

- Separate from each other – 136
- Conglomerate – 44
- Matted - 12



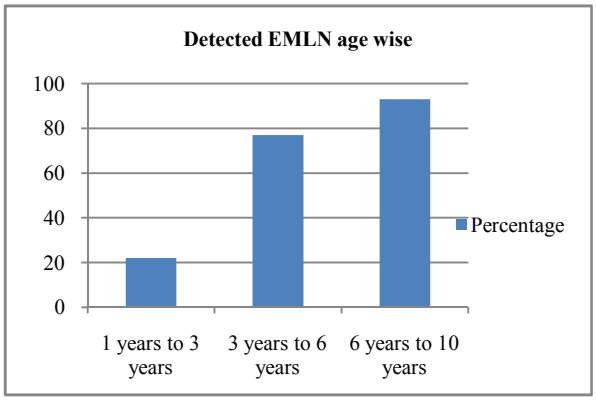
Inflammatory Parameter

- High leukocyte count – 114
- High leukocyte count + Raised ESR – 63
- Raised ESR – 15



Detected EMLN age wise

- 1 years to 3 years – 22
- 3 years to 6 years – 77
- 6 years to 10 years – 93



DISCUSSION

In our study we observed that EMLN was more marked in the age group 3 to 10years with high leukocyte count. Mostly these cases were mimic as acute appendicitis. Another observation we noted that more number of cases were found where EMLN was having long axis 10 mm to 20 mm with short axis more than 05 mm. Another observation was noted in our study was more number of cases were presented with symptoms of pain abdomen followed by vomiting where number of EMLN were more than 05 & less than 10 numbers. 136 cases presented with EMLN as separated from each other.

Many authors suggested in their study as a largest diameter greater than 10 mm as pathological. Some authors use the term as "mesenteric adenitis" only when short axis diameter is more than 05 mm & largest diameter is more than 10 mm.
Looking to their views we also observed more number of cases were in the group where the long axis is greater than 10 mm & short axis is more than 05 mm.

CONCLUSION

Acute abdominal pain in children is common with non-specific manifestation of a verity of diseases in children ranging from acute appendicitis, mesenteric lymphadenitis to gastro-enteritis etc. It has been also observed that the clinical signs & symptoms with diagnosis overlap in a considerable way. So in these cases USG plays a vital & safe diagnostic modality to differentiate between the common causes of pain abdomen in children. Clinicians also can get the opportunity to expedite appropriate clinical management after getting USG report.

We conclude that the children who present with pain abdomen & vomiting should have early scope of diagnostic modality of USG of abdomen without any delay to save the life. The clinicians should not think a child coming to him with pain abdomen is having acute appendicitis only. Instead they should also think other differential diagnosis & to advice USG examination as EMLN is also a major findings of pain abdomen.

References

1. Adams EW, olney BM "Mesenteric lymphadenitis and acute abdomen" Annals of surgery - 1938, 107: 359-70.
2. Leung KCA, Sigalet LD "Acute abdominal pain in children" *Am. Fam. Physician*- 2003, 167 (II), 2321-7.
3. Luccy BC, Stuhlfaut JW, Soto JA- "Mesenteric lymphnodes seen at imaging causes & significance"- Radiographics, 2005-25, 351-65.
4. Simanovsky N, Hillar N-"Importance of sonographic detection of enlarged abdominal lymphnodes in children"- *J. Ultrasound med*.2007.may, 26 (5) 581-4.
5. Sikorska-wisniewska G, Liberek A, Gora-Gebka M, Bako W, Maker A, Szlagatys-sidorkiewicz A, Jankowska A "Mesenteric lymphadenopathy – A valid health problem in children"- 2006, April-Jun- 10(2) 453-62.
6. Mahaswari K, Latika Wadhwa-"Clinical profile & causes of mesenteric lymphadenitis in children" – *International journal of contemporary paediatrics*- 2016, may 3 (2) - 550-552.
7. Alamdaran A- "Diagnostic value of ultrasound findings in mesenteric lymphadenitis in children with acute abdominal pain"- *J. Radiology* 2005-2.
8. Roshanchanchlami, Associate professor, Department of surgery Chirayu medical college, Bhopal-"Clinical profile & management of mesenteric lymphadenitis in children – our experience"- *International journal of orthopaedic traumatology & surgical science*, volume-I, ISSUE 1 Dec-may-2015.
9. Vinoo Jacob, A.S. Krishna kumar-"Mesenteric lymphadenitis in children presenting with abdominal pain"- *Journal of evoluation of medical & Dental science* 2013, volume-2, Issue-47, Nov-25, Page- 9190-9194.
10. Healy MV, Graham PM-"Assessment of abdominal lymphnodes in a normal paediatric population, an ultrasound study "- *Australas Radiology*: 1993, 37 : 171-172.
11. Watanabe M, IshiiE, Hirowateri Y, *et-al*- "Evaluation of abdominal lymphadenopathy on children by ultrasonography"- *Paediatric Radiology* 1997, 27 : 860-864.
12. Itai Gross, Yad siedner weintraub, shir stibhe, David Rekhtmarr, Daniel sweiss *et-al*-"Characteristics of mesenteric lymphadenitis in comparison with those of acute appendicitis in children"- *Europian journal of paediatric,* February-2017, volume-176, issue-2, P-199-205.

How to cite this article:

Rudra Narayan Dash and Gitanjali Satpathy.2018, Usg Evaluations of Enlarged Mesenteric Lymphnodes (Emln) In Children and Its Clinical Manifestations. *Int J Recent Sci Res.* 9(1), pp. 23160-23162.
DOI: http://dx.doi.org/10.24327/ijrsr.2018.0901.1409