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PART 1 | IMAGING IN CLINICAL PRACTICE

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A 30 year-old female presented with shortness of breath, orthopnea, palpitation, and sweating. On examination her blood pressure was 220/120, heart rate was 110 regular. Echocardiography showed LV systolic dysfunction and thyroid function test was within normal. The ultrasound of the abdomen shown here.

Q1: Describe the ultrasonographic findings?
Q2: What are the differential diagnosis?
Q3: What is the next?

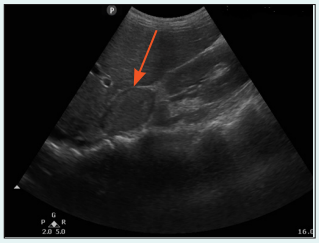

Figure 1: Ultrasound of the right loin.

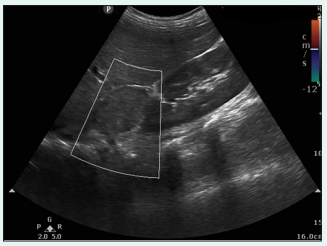

Figure 2: Colour Doppler study

ANSWER OF Q1:

An oval shaped mass, with a size of 3x 2.5 cm in the right supra-renal gland between the kidney and liver. The mass has a smooth margin, isoechoic, and homogenous in texture with areas of hypoechoic density. No evidence of calcifications was seen. (Figure 1) Colour Doppler study of the mass shows no flow. (Figure 2)

ANSWER OF Q2:

Benign tumour:

- **Adenoma**: it is the commonest tumour in the adrenals, and the most common cause of incidentaloma. Its prevalence in autopsy is 10-20 %, and in 90% they are silent. They are usually small size, rarely reached up to 5 cm in diameter. Usually round or oval, smooth margin and has a non-homogenous texture.
- **Lipoma and Myolipoma**: a fat content tumours, on ultrasound these tumours are highly echogenic and show a diagnostic bright hyperechoic appearance.
- **Myelolipoma**: It contains fat and bone marrow tissues. Has a smooth margin, hyperechoic and homogenous texture, may contain calcification or intratumoral haemorrhage.
- **Calcification**: It is rarely presented as a mass. It has a typical echo complex with posterior acoustic shadow. It may complicate tuberculosis, histoplasmosis, blastomycosis, or haemorrhage. Calcification can be seen also in carcinoma, metastasis, pheochromocytoma and adenoma.

Malignant or potentially malignant:

- **Metastasis**: Adrenals are the fourth common site for metastasis, and the second commonest tumour of adrenals. It has irregular margin, and non-homogenous texture. It is bilateral in 30 % of cases. Origin are from carcinoma of lung, breast and melanoma.
- **Pheochromocytoma**: The third commonest cause of mass in adrenals. On diagnosis, it may be several centimetres in diameter. It has usually round shape with smooth margin. It is non-homogenous with hypoechoic component. May be malignant.
- **Adrenal carcinoma**: It is very rare, mainly in adults (45-55 years), highly malignant tumour. It is usually inhomogeneous hypoechoic or echocomplex with irregular margins.
- **Neuroblastoma**: mainly in children, on ultrasound the appearance is widely variable from echogenic tumour with calcifications to cystic areas from necrosis or haemorrhage.

Others:

- **Intra-adrenal Haemorrhage**: It is mainly seen in newborns. In adults, it is reported after trauma or using anticoagulants. In acute stage it is anechoic but in chronic state it tends to be hyperechoic.
- **Adrenal Cysts**: with haemorrhage.

ANSWER OF Q3:

Three important steps are needed. The first, is better imaging diagnosis like CT scan, MRI, and adrenal radionuclide study. The second, is hormonal diagnosis like measuring serum electrolytes, serum cortisol and dexamethasone suppression tests, and plasma renin and aldosterone level. In addition to measurement of free catecholamines in 24 hours urine to exclude ***pheochromocytoma which is the diagnosis in this patient***. The third is biopsy diagnosis.

References

1. Ackery DM, Tippett PA, Condon BR, Sutton HE, and Wyeth P. New approach to the localisation of phaeochromocytoma: imaging with iodine-131-meta-iodobenzylguanidine. *Br Med J (Clin Res Ed)* 1984 May 26; 288(6430): 1587–1591.
2. Adams JE, Johnson RJ, Rickards D, Isherwood I. Computed tomography in adrenal disease. *Clinical Radiology* 1983 ; 34 (1): 39-49.
3. Wong KW, Lee IPO, and Sun WH. Rupture and growth of adrenal myelolipoma in two patients.*BJR* 1996; 69(825):873-875.
4. Leung K, Stamm M, Raja A, Low G. Pheochromocytoma: The Range of Appearances on Ultrasound, CT, MRI, and Functional Imaging. *AJR* 2013; 200:370–378.
5. Nürnberg D, Szebeni A, Záťura F. Ultrasound of the adrenal glands [Internet]. 2011 [cited in June 1, 2017]. Available from: *http://www.kosmos-host.co.uk/efsumb-ecb/coursebook-adrenal_ch11.pdf*.

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PART 2 | WHAT DO YOU KNOW ABOUT?

Management of low back pain:

Recommendation of American College of Physicians 2017

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Low back pain is one of commonest causes of visiting clinics all over the world. Its diagnosis and management possess a great challenge for any physician. We are living now a time where theraphies, both pharmacologic and non paharmacologic, are extensively present many of them are very expensive not only for patients themselves but on the health system as well. Which one of these therapies is valid and has a good effect approved by a good quality research and which one is not? This is what these questions and the followed answers are going to show based on the recommendation of the American College of Physicians systematic review of 2017.

Answer the following questions by putting the word true or false before each statement:

1. Low back pain in clinical practice:

(a) Is rarely encountered in daily practice.

(b) About one quarter of U.S. adults reported having low back pain lasting at least 1 day in the past 3 months.

(c) As it is usually mild, it adds little on the cost of the health.

(d) Both genders can be affected.

(e) Knowing the duration of the symptoms does not affect the treatment options.

2. Types of low back pain according to its duration:

(a) Pain which is lasting more than 12 weeks is called acute.

(b) Subacute pain is the pain which lasts 4-12 weeks.

(c) If the pain persists more than 12 weeks we call it chronic..

(d) Radicular low back pain means pain, paraesthesia, and /or weakness in the lower extremities.

(e) Radicular low back pain occurs due to nerve root impingement.

3. The followings drugs have a role in treatment of acute or subacute low back pain:

(a) Systemic corticosteroids.

(b) Acetaminophen (paracetamol).

(c) Benzodiazepines.

(d) Antidepressants.

(e) Anti-seizures.

4. A 30-year-old man complaining from 3 days history of pain at the lumbar area. He reported no pain, numbness or paraesthesia in both lower limbs. The following statement is true regarding the best treatments:

(a) The first choice is to give high dose NSAIDs to control pain.

(b) If the patient's pain left without treatment, it tends to become chronic.

(c) Non-pharmacological treatment is of no benefit in acute stage.

(d) Exercise is better option than superficial heat.

(e) Adding Lumbar support to other intervention is augmenting the benefit.

5. Regarding harms of pharmacologic therapies of low back pain:

(a) Using scheduled acetaminophen carries more serious adverse events than using acetaminophen taken as needed.

(b) COX-2-selective NSAIDs were associated with a decreased risk for adverse events compared with traditional NSAIDs.

(c) Short term use of opioids increased nausea, vomiting and constipation compared to placebo.

(d) Risk of adverse events did not differ between gabapentin versus placebo.

(e) Use of systemic corticosteroid has a severe detrimental effect on control of sugar in patient who is concomitantly has diabetes mellitus.

6. Acute low back pain:

(a) *Low Back pain of > 12 weeks.*

(b) *Is the Low back pain that occurs secondary to trauma.*

(c) *Low back pain of < 4 weeks .*

(d) *If left untreated, it may change to be chronic .*

(e) *Substantial Improvement is high likely occur within first month.*

7. Non-pharmacologic Treatment of acute and subacute low back pain:

(a) It is a shared decision-making approach.

(b) Non-pharmacologic interventions shown to be effective for improving pain and function.

(c) Quality evidence shows that massage is better than superficial heat in controlling pain.

(d) Acupuncture and spinal manipulation is the most effective non-pharmacologic treatment.

(e) Harms of non-pharmacologic interventions were sparsely reported, and no serious adverse events were reported.

8. Pharmacologic treatment of acute and subacute low back pain:

(a) Acetaminophen is the drug of choice for pain.

(b) NSAIDs and skeletal muscle relaxants have shown small improvement in pain relief.

(c) Adverse events may limit the use of skeletal muscle relaxants and traditional NSAIDs.

(d) COX-2-selective NSAIDs is as effective as traditional NSADs in controlling pain.

(e) Short course systemic steroid improves pain but not function.

9. The following Non-pharmacologic interventions have a recognized effect on pain for chronic low back pain:

(a) Cognitive behavior.

(b) Exercise therapy .

(c) Multidisciplinary rehabilitation .

(d) Acupuncture.

(e) Ultrasound.

10. Pharmacologic therapy of chronic low back pain:

(a) Tramadol is the first line therapy.

(b) Due to their adverse events, NSAIDs are considered the second-line therapy.

(c) SSRI have no benefit in chronic low back pain.

(d) Opioids should be reserved for patients who failed to get response from using other therapies.

(e) Systemic steroid has a good role when other options have failed to give the required effect.

Management of low back pain:

Recommendation of American College of Physicians 2017

Answers of Questions on page 121-122

1. ***Answers (F, T, F, T, F)*** : Low back pain is one of the most common reasons for visiting physicians in the United States. Approximately one quarter of U.S. adults reported having low back pain lasting at least 1 day in the past 3 months. Although low back pain sounds a mild complaint in many patents, it I associated with high costs, including both direct health costs and indirect costs incurred from missed work and low productivity. Low back pain can involve both gender, its management depends on classifying the pain according to its duration into acute, sub-acute and chronic. Effects of most of pharmacologic and nonpharmacologic therapy differ according to whether the pain in acute or chronic.

2. ***Answers (F, T, T, T, T)***: Low back pain can be classified according to many parameters. Classification according to the time the pain lasts carries a clinical implication in deciding the mode of therapy. Acute low back pain is the pain which lasts <4 weeks. While pain which persists >12 weeks is called chronic. Pain persists between 4-12 weeks is called sub-acute. The presence of pain, paraesthesia, and /or weakness in the lower extremities means that the nerve root is impinged and this is called radicular low back pain.

3. ***Answers (F, F, F, F, F)***: Neither local injection nor oral corticosteroid have a role in treatment of acute low back pain. Low-quality evidence showed no difference in pain or function between a single intramuscular injection of methylprednisolone or a 5-day course of prednisolone compared with placebo in patients with acute low back Pain. Acetaminophen is not recommended by The American College of physicians as a treatment for acute low back pain because evidence, although low quality, has showed no difference between acetaminophen and placebo for pain intensity or function through 4 weeks or between acetaminophen and NSAIDs for pain intensity or likelihood of experiencing global improvement at 3 weeks or earlier. Benzodiazepines, antidepressants, anti-seizures, or opioids are not recommended because evidence was insufficient to determine their effectiveness in comparison to placebo in patients with acute or subacute low back pain.

4. ***Answers (F, F, F, F, T)***: The American college of physicians systematic review recommends that acute or subacute low back pain improve overtime regardless of treatment. Non-pharmacologic treatment with superficial heat has a moderate quality evidence in controlling pain. Other non-pharmacological treatment like massage, acupuncture, or spinal manipulation has a low quality evidence to improve the pain. However, combination of more than one mode of treatment is better than each alone. Although it is a low quality evidence, no difference in pain or function between lumbar support added to an educational programme or other intervention than them alone. When pharmacologic treatment is needed, NSAIDs or Skeletal muscle relaxant is of choice; however, it is preferred after starting with nonpharmacologic treatment. Using exercise in acute or subacute low back pain shows no difference in controlling pain. And comparison between different exercise regimens shows no clear difference.

In acute or Subacute low back pain **NSAIDs** and **skeletal muscle relaxants** are recommended

In acute or subacute low back pain: **Acetaminophen**, **systemic steroid**, **benzodiazepine**, and **antidepressants** are not recommended

In acute low back pain **heat wrap**, and **massage** are recommended **while lumbar support** and **exercise** are not

5. ***Answers (F, T, T, T, F)***: The systematic review of the ACP has shown that using scheduled acetaminophen, acetaminophen taken as needed or placebo did not differ in development of serious adverse events. Both COX-2-selective NSAIDs and acetaminophen were associated with a decreased risk for adverse

events compared to traditional NSAIDs. Gastro-intestinal adverse events such as nausea, vomiting and constipation reported more frequently on using short term opioids. Although it is low quality evidence, risk of development of adverse event did not differ between gabapentin and placebo. Although the use of corticosteroid was associated with many adverse events like insomnia, nervousness and increased appetite; however, low quality evidence showed no cases of hyperglycaemia that required medical attention

6. ***Answers (F, F, T, F, T)***: Acute low back pain is common in daily clinical practice. It is defined as pain at the low back of less than 4 weeks. The cause of acute low back pain is not necessarily traumatic. Acute as well as subacute low back pain improve overtime regardless of treatment. Clinicians should inform all patients of the general favourable prognosis of acute low back pain whether sciatica is present or not. In most of the cases substantial improvement occur within a month.

In chronic low back pain: **NSAIDs** are the first choice

7. ***Answers (T, T, F, F, T)***: Clinicians and patients should use a shared decision-making approach to select the most appropriate treatment based on patient preferences, availability, harms, and costs of the interventions. Non-pharmacologic interventions shown to be effective for improving pain and function in patients with acute or subacute low back pain. Superficial heat and massage both have shown moderate improvement in pain and function; however, the evidence for superficial heating is moderate quality while it is low quality for massage. While acupuncture and spinal manipulation had a small effect on improving pain with low quality evidence. Harms of non-pharmacologic interventions were sparsely reported, and no serious adverse events were reported. Skin flushing is reported with superficial heat and muscle soreness is reported with massage and spinal manipulation

In chronic low back pain: **Tramadol** and **duloxetine** are the second choice

In chronic low back pain: **Opioids** are used if others failed

8. ***Answers (F, T, T, F, F)***: NSAIDs and skeletal muscle relaxants have shown a small improvement in pain relief with moderate quality evidence. However, NSAIDs has shown also improvement in the function while the effect of skeletal muscle relaxants on the function has not studied very well. Both treatments have some side effects that may limit their use. American College of Physicians do recommend against using acetaminophen and systemic steroid in controlling pain in acute low back pain. For acetaminophen, updated evidence has shown that it was not effective at improving pain outcome versus placebo. For systemic steroid, studies have shown that it was not effective in treating acute or subacute low back pain despite being low-quality evidence.

9. ***Answers (T, T, T, T, F)***: Non-pharmacologic interventions are considered as first-line options in patients with chronic low back pain because fewer harms are associated with these types of therapies than with pharmacologic options. Moderate-quality evidence showed that exercise therapy resulted in small improvements in pain and function. Low-quality evidence showed that multidisciplinary rehabilitation resulted in a moderate improvement in pain and a small improvement in function compared with no multidisciplinary rehabilitation. Acupuncture had a moderate effect on pain and function compared with no acupuncture electromyography biofeedback and CBT each had a moderate effect on pain and no effect on function, Ultrasound, TENS had no effect on pain or function compared with control treatments.

10. ***Answers (F, F, T, T, F)***: Pharmacologic therapy is indicated in patients with chronic low back pain who have had an inadequate response to non-pharmacologic therapy. NSAIDs are considered the first line therapy. No one of this class is superior on another as evidence (moderate-qulity) showed no difference in pain improvement when different NSAIDs were compared with one another. Effect should be balance with the potential gastrointestinal and renal risks usually starts with the lowest effective doses for the shortest periods needed. Although COX-2-selective NSAIDs have less adverse event than the traditional NSAIDs but their effectiveness in improving pain and function were not assessed adequately. Tramadol and duloxetine are recommended by the American college of physicians as a second line therapy as moderate-quality evidence showed that they have effect on pain and function. The improvement is moderate for tramadol and

small for duloxetine. Opioids should be the last treatment option considered and should be considered only in patients for whom other therapies have failed because they are associated with substantial harms. Evidence for both short and long acting opioids showed a small effect on short-term pain and function.

Moderate-quality evidence showed that TCAs and SSRIs did not effectively improve pain or function. Physician should avoid prescribing costly or ineffective drugs for patients.

Answers based on the recommendations of the American College of Physicians 2017

1. Qaseem A, Wilt TJ, McLean, and Forciea MA. Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians. ***Ann Intern Med*** 2017;166(7):514-530. doi:10.7326/M16-2367.

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PART 3 | Medical Ethics in Clinical Practice

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Clinical ethics is a practical discipline that provides a structured approach to assist physicians in identifying, analyzing and resolving ethical issues in clinical medicine.[1]

The practice of good clinical medicine requires some working knowledge about ethical issues and values such as Beneficence, Non-maleficence, Respect for Autonomy, and Justice and Fairness.[2]

Medicine, even at its most technical and scientific aspects, is an encounter between human beings, and the physician's work of diagnosing disease, offering advice, and providing treatment is embedded in a moral context.[1]

Good medical practice described by the General Medical Council in the UK expected registered doctor to meet the practice standards in the following duties domains:[3]

1. Knowledge, skills and performance.
2. Safety and quality.
3. Communication, partnership (patient doctor relationship) and teamwork.
4. Maintaining trust.

Patients need good doctors that provide good care, put patient safety first, treat patients as individuals and must be honest and trustworthy.[4]

Good doctors make the care of their patients their first concern: they are competent, keep their knowledge and skills up to date, establish and maintain good relationships with patients and colleagues, are honest and trustworthy, and act with integrity and within the law.[5]

The patient–doctor relationship is an important concept in health care, especially primary care. It is a complex topic that means different things to different people. Some scholars investigated it in terms of the communication and interpersonal skills of the doctor, for others major facet is continuity of patient care, where the relational aspect is referred to as interpersonal continuity.[6]

Everyone is aware of the fact that good doctor and patient relationship is relevant to the sustenance of any healthcare. However, external influences are making it increasingly difficult to attain a good communication.[7]

Usually, moral values such as mutual respect, honesty, trustworthiness, compassion, and a commitment to pursue shared goals, make a clinical encounter between physician and patient morally unproblematic and consider as an effective relationship. Occasionally, physicians and patients may disagree about values or face choices that challenge their values. It is then that ethical problems arise.[1]

The recognition of the importance of doctor patient relationship and communication in medicine has particular relevance for primary care physician whose discipline has long focused on the importance of the doctor patient relationship quality health care delivery.[8]

The essential elements of a good doctor-patient relationship are: Respect, confidentiality, professional honesty, and communication.[9]

The ultimate objective of any doctor-patient communication is to improve the patient's health and medical care.[7, 10]

Basic communication skills in isolation are insufficient to create and sustain a successful therapeutic doctor-patient relationship, which consists of shared perceptions and feelings regarding the nature of the problem, goals of treatment, and psychosocial

support.[11, 12]

Having good communication skills is essential for doctors to establish good doctor patient relationship.[8]

Effective doctor-patient communication is a central clinical function in building a therapeutic doctor-patient relationship, which is the heart and art of medicine and a central component in the delivery of health care.[10, 11]

The three main goals of current doctor-patient communication are creating a good interpersonal relationship, facilitating exchange of information, and including patients in decision making, help regulate patients' emotions, help patient to follow advice and adhere to the prescribed treatment and improve their general satisfaction.[7, 11, 12, 13]

Professionalism is the core competency of physicians, developed over the framework of clinical competence, effective communication skills and sound knowledge of ethical and legal aspects of medicine.[14] These attributes cannot be learned by chance alone; they can be taught, learned and assessed. One of the major reasons to incorporate these skills into medical education is to improve overall patient care.[15] Effective communication skills and sound knowledge of ethical issues contributes to better doctor-patient relationship and medical outcome.[14]

According to American Medical Association (AMA), there are some ethical issues that need to be explored in the doctor-patient relationship; Trust, confidentiality and Informed consent.[7, 16]

Among Ways of Improving Doctor-Patient Relationship is by: Effective Communication, Empathy and Active Listening.[7]

CASE SCENARIOS

Case 1: Mistake – Medical Error

A 3-month-old has been admitted to the hospital with a newly diagnosed ventricular septal defect. She is in early congestive heart failure and digoxin is indicated. After discussing the proper dose with the attending physician, you write an order for the drug. Thirty minutes later the baby vomits and then has a cardiac arrest and dies. You discover that in writing the digoxin order you misplaced the decimal point and the child got 10 times too much digoxin.

What is your duty here?

a. Inform the parents about the mistake and say you are sorry.
b. Do not inform the parents.
c. Do not say sorry.
d. Try to hide the document that confirm the medical error, because a malpractice lawsuit may follow.

Case 2: Mistake – Medical Error

A 3-year-old child presents to the emergency department. She was diagnosed with pyelonephritis by her physician yesterday, treated with an intramuscular injection of antibiotic and sent home on an oral antibiotic. She is vomiting today and unable to keep the antibiotic down. As you prepare to admit her, you feel she should have been admitted yesterday.

Should you tell the parents that their physician made a mistake?

a. Yes the parents should be told.
b. The parents should not be told.
c. Discuss the case first with the other treating physician, then tell the parents.
d. Report the incident to the department manager and not the parents.

Case 3: Informed Consent

A 36-year-old man presents for bone marrow donation for transplantation. His primary care physician contacts the anaesthesiologist

to report that the donor is extremely anxious about the procedure. The primary doctor requests that the anaesthesiologist should not discuss risks with the donor, since it might "scare" him into not providing bone marrow for a sick cousin.

Should you curtail (limit) risk discussion?

a. Yes because the primary care physician personally contacted the anaesthesiologist.
b. Yes for the purpose of improving the likelihood that the donor will cooperate with bone marrow donation.
c. No because curtailing the risk discussion to avoid scaring the donor is a distinctly unethical practice.
d. None of the above.

ANSWERS OF CASE SCENARIOS

Answer of case 1 is a:

This unfortunate event represents a serious error with profound implications for the patient and family. You owe this family an honest explanation. They need to hear you say that you're sorry. Any attempt to hide the details of the event would be dishonest, disrespectful, and wrong. Though a lawsuit may follow, these parents are less likely to litigate if you deal with them honestly and take responsibility for the error.[17, 18]

Answer of the case 2 is b:

The practice of medicine is not an exact science. Frequently physicians will disagree about what constitutes the most appropriate management in a given case. Often these are legitimate disagreements with more than one acceptable course of action. Simply because you would have managed a patient differently does not mean the other physician made a mistake. In this case, you may wish to discuss the case with the other physician and explain why you manage children with pyelonephritis differently. However, in situations where standard practice varies, the parents should not be told that a mistake has been made.[17, 18]

Answer of the case 3 is c :

This request to curtail discussion of risks is not originating with the donor. To avoid discussion for the purpose of improving the likelihood that the donor will cooperate with bone marrow donation does not only carry some mistaken assumptions about the effects of risks discussions, but it "uses" the patient to meet the ends of another individual, rather than to further his own goals, a distinctly unethical practice. Since the donor is anxious, it is reasonable to offer to discuss risks with him, but inform him that he has the choice to not have a detailed discussion if he thinks it might unduly stress him. More importantly, a well-done discussion of risks with this donor can be reassuring, and serve to decrease his anxiety about the upcoming procedure. The donor may be suffering from unreasonable fears about the risks of the procedure. Since the donor is healthy, anaesthesia and procedure risks are minimal. He can be reassured that the procedure presents him with less risk than many things he does every day without much concern--such as driving a car to his appointment in your office.[17,19]

REFERENCES

1. University of Washington School of Medicine. ETHICS IN MEDICINE: Case Analysis in Clinical Ethics. [Internet]. 2014 [updated in September 3, 2014; cited in May 28, 2017]. Available from: *http://depts.washington.edu/bioethx/tools/ceintro.html*.
2. Jonsen AR, Siegler M, Winslade W. Clinical Ethics: a Practical Approach to Ethical Decisions in Clinical Medicine. 7th ed. New York: McGraw-Hill Publishing; 2010.
3. General Medical Council. The duties of a doctor registered with the GMC. (2010) Good practice in research London, GMC. Available at: *http://www.gmc-uk.org/guidance/good_medical_practice/duties_of_a_doctor.asp.html*. Access date 24/5/2017.
4. General Medical Council. What to expect from your doctor: a guide for patients. [Internet]. 2013 [cited in May 22, 2017]. Available at: *http://www.gmc-uk.org/guidance/ guidance/patients.asp.html*.
5. General Medical Council professionalism in action. Available at: *http://www.gmc-uk.org/guidance/good_medical_practice/professionalism_in_action.asphtml*. Access date 22/5/2017.
6. Mario S. Reflection on the Doctor-Patient Relationship: From Evidence and Experience. *Br J Gen Pract* 2005; 55(519): 793-801.
7. Femi AF, Dada OJO MO, Asamu FF et al. Managing Doctor-Patient Socio-Medical Relationships in the Health Care Delivery System: Impacts and Ways Forward. *Scholars Journal of Arts, Humanities and Social Sciences* 2015; 3(1A):1-7.
8. Wong SYS, Lee A. Communication Skills and Doctor Patient Relationship. *Medical Bulletin* 2006; 11(3):7-9.
9. Raina RS, Singh P, Chaturved A, etal. Emerging Ethical Perspective in Physician-Patient Relationship. *Journal of Clinical and Diagnostic Research* 2014; 8(11): 1-4.
10. Douglas AD, Swantkowski DD. Improving the Doctor-Patient Relationship. [Internet]. 2013 Edition [Cited in May24, 2017]. Available from: *https://www.med.unc.edu/ibs/files/educational-gi-handouts/Improving%20the%20Patient-Doctor%20Relationship.pdf*.
11. Fong Ha J, Anat S, Longnecker N. Doctor-Patient Communication: A Review. *Ochsner J* 2010; 10(1): 38–43.
12. Hall J. A., Roter D. L., Rand C. S. Communication of affect between patient and physician. *J Health Soc Behav* 1981; 229(1):18-30.
13. The Institute for Healthcare Communication. Impact of Communication in Healthcare [Internet]. 2011 [Cited in May 25, 2017]. Available from: *http://healthcarecomm.org/about-us/impact-of-communication-in-healthcare*.
14. AHSIN S, SHAHID A, GONDALGM. Teaching communication skills and medical ethics to undergraduate medical student. *J Adv Med & Prof* 2013; 1(3):72-76.
15. Roberts LW, Warner TD, Hammond KA, Geppert CM, Heinrich T. Becoming a good doctor: perceived need for ethics training focused on practical and professional development topics. *Acad Psychiatry* 2005; 29: 301-9.
16. Riddick F P. The Code of Medical Ethics of the American Medical Association. *Ochsner J* 2003; 5(2):6-10.
17. EXAM QUESTIONS & ANSWERS LEGAL MEDICINE & MEDICAL ETHICS Source: Bioethics Topics. Washington School of Medicine. 2009 Exam Questions & Answers LEGAL MEDICINE & MEDICAL ETHICS . Available at: *http://www.ablminc.org/a%20day%20with%20the%20judges_10-30-09_okc/OSMA%20Materials%20for%20Web/10_Medico-Legal%20Qs%20&%20As_SSS.pdf. Access date 26/5/2017*.
18. Diekema D S. Mistake. In: In: University of Washington School of Medicine. Ethics in Medicine [Internet]. 1998 [last updated April 11, 2008; Cited in May 26, 2017]. Available from: *http://depts.washington.edu/bioethx/topics/mistks.html*.
19. De Bord J. Informed Consent. In: University of Washington School of Medicine. Ethics in Medicine [Internet]. 2014 [last updated March 7, 2014; Cited in May 25, 2017]. Available from: *http://depts.washington.edu/bioethx/topics/consent.html*.