Sri Lakshmi Narayana Institute of Medical Sciences

Date: 05.08.2017

From

Dr.G.Somasundram
Principal of Allied Health Sciences,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

To

The Dean,
Sri Lakshmi Narayana Institute of Medical College
Bharath Institute of Higher Education and Research,
Chennai.

Sub: Permission to conduct value-added course: Pericardiocentesis

Dear Sir,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled: **Pericardiocentesis** from September to October 2019. We solicit your kind permission for the same.

Kind Regards

Dr.G.Somasundram

FOR THE USE OF DEANS OFFICE

Names of Committee members for evaluating the course:

The Dean: **Dr. Jayalakshmi**

The HOD: **Dr. Somasundram. G**

The Expert: **Dr. Pasmithadevi**

The committee has discussed about the course and is approved.

Dean	Subject Expert	HOD
(Sign & Seal)	(Sign & Seal)	(Sign & Seal)

Dr. G. JAYALAKSHMI, BSC., MBBS., DTCD., M.D.,
DEAN
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Agaram, Kudapakkam Post,
Villianur Commune, Puducherry - 605502.

PRINCIPAL
Allied Health Sciences
Sri Lakshmi Narayana Institute of Allied Health Sciences
Osudu, Agaram Post, Puducherry - 605 502.

OFFICE OF THE DEAN

Sri Lakshmi Narayana Institute of Medical Sciences

OSUDU, AGARAM VILLAGE, VILLIANUR COMMUNE, KUDAPAKKAM POST,
PUDUCHERRY - 605 502.
[Recognised by Medical Council of India, Ministry of Health letter No. U/12012/249/2005-ME (P -II) dt. 11/07/2011]
[Affiliated to Bharath University, Chennai - TN]

Circular

31.08.2017

Sub: Organizing Value-added Course: "Pericardiocentesis".reg

With reference to the above mentioned subject, it is to bring to your notice that Sri Lakshmi Narayana Institute of Medical Sciences, **Bharath Institute of Higher Education and Research** is organizing **"Pericardiocentesis"**. The course content and registration form is enclosed below."

The application must reach the institution along with all the necessary documents as mentioned. The hard copy of the application should be sent to the institution by registered/ speed post only so as to reach on or before September to October 2019. Applications received after the mentioned date shall not be entertained under any circumstances.

Dean

Dr. G. JAYALAKSHMI, BSC., MBBS., DTCD., M.D.,
DEAN
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Agaram, Kudapakkam Post,
Villianur Commune, Puducherry - 605502.

Encl: Copy of Course content

VALUE ADDED COURSE

1. Name of the programme & Code

"Pericardiocentesis" & VAC02/AHS/2019-16/09

2. Duration & Period

30 hrs. & September to October 2019

3. Information Brochure and Course Content of Value Added Courses

Enclosed as Annexure- I

4. List of students enrolled

Enclosed as Annexure- II

5. Assessment procedures:

Assessment - *Enclosed as Annexure- III*

6. Certificate model

Enclosed as Annexure- IV

7. No. of times offered during the same year:

1 time September to October 2019

8. Year of discontinuation: 2020

9. Summary report of each program year-wise

Value Added Course- September to October 2019					
Sl. No	**Course Code**	**Course Name**	**Resource Persons**	**Target Students**	**Strength & Year**
1	VAC02/AHS/2019-16/09	**Pericardiocentesis**	Dr. Pasmithadevi	AHS	30 AHS students September to October 2019

10. Course Feed Back

Enclosed as Annexure- V

RESOURCE PERSON

COORDINATOR
Dr.G.Somasundram

PRINCIPAL
Allied Health Sciences
Sri Lakshmi Narayana Institute of Allied Health Sciences
Osudu, Agaram Post, Puducherry - 605 502.

Course Proposal

Course Title: "**Pericardiocentesis"**

Course Objective:

1. To enhance the performance skill in Pericardiocentesis.
2. To assess the reaction of target allied Health students in Pericardiocentesis getting their feedback.

Course Outcome: Improvement in the "Pericardiocentesis"
Course Audience: Students of AHS Batch
Course Coordinator: Dr.G.Somasundram
Course Faculties with Qualification and Designation:
1. Dr.Pasmithadevi
Course Curriculum/Topics with schedule (Min of 30 hours)

SlNo	Date	Topic	Time	Hours
1.	16.09.2019	Introduction to Pericardiocentesis	4-6p.m	2
2.	17.09.2019	What is Pericardiocentesis	2-4p.m	2
3.	19.09.2019	Pericarditis	4-6p.m	2
4.	20.09.2019	Pericardial effusion	4-6p.m	2
5.	22.09.2019	Cardiac Tamponade	4-6p.m	2
6.	23.09.2019	Complications of Pericarditis	4-6p.m	2
7.	25.09.2019	Indications of Pericardiocentesis	4-6P.M	2
8.	27.09.2019	Contraindications for Pericardiocentesis	4-6p.m	2
9.	30.09.2019	Video demonstration Pericardiocentesis	4-6p.m	2
10.	04.09.2019	Risk of Pericardiocentesis	4-6p.m	2
11.	05.09.2019	Diagnostic procedure involved in Pericarditis	4-6p.m	2
12.	07.09.2019	Echo in Pericarditis	4-6p.m	2
13.	10.09.2019	Pre course and Post Course evaluation, Feedback analysis	2-4p.m	2
14.	11.09.2019	Steps model explanation and various performance assessment	4-6p.m	2 m
15.	12.09.2019	Orientation of the students about the training program and	2-4p.m	2

		assessment		
		Total		30 hrs.

REFERENCE BOOKS:

1.Gupta, Pooja; Ibrahim, Amar; Butany, Jagdish (2014-01-01), Willis, Monte S.; Homeister, Jonathon W.; Stone, James R. (eds.), "Chapter 16 - The Pericardium and its Diseases", Cellular and Molecular Pathobiology of Cardiovascular Disease, San Diego: Academic Press, pp. 297–314, doi:10.1016/b978-0-12-405206-2.00016-8, ISBN 978-0-12-405206-2.

2.Jneid, Hani; Maree, Andrew O.; Palacios, Igor F. (2008-01-01), Parrillo, Joseph E.; Dellinger, R. Phillip (eds.), "Chapter 6 - Pericardial Tamponade: Clinical Presentation, Diagnosis, and Catheter-Based Therapies", Critical Care Medicine (Third Edition), Philadelphia: Mosby, pp. 85–92, doi:10.1016/b978-032304841-5.50008-x, ISBN 978-0-323-04841-5.

3.Fashoyin-Aje, Lola A.; Brahmer, Julie R. (2020-01-01), Niederhuber, John E.; Armitage, James O.; Kastan, Michael B.; Doroshow, James H. (eds.), "59 - Malignancy-Related Effusions", Abeloff's Clinical Oncology (Sixth Edition), Philadelphia: Elsevier, pp. 863–873.e4, doi:10.1016/b978-0-323-47674-4.00059-1, ISBN 978-0-323-47674-4.

4. Sorajja, Paul (2018-01-01), Kern, Morton J.; Sorajja, Paul; Lim, Michael J. (eds.), "17 - Pericardiocentesis", The Interventional Cardiac Catheterization Handbook (Fourth Edition), Elsevier, pp. 438–447, doi:10.1016/b978-0-323-47671-3.00017-x, ISBN 978-0-323-47671-3.

5. Sovari, Ali S. (2019-01-01), Brown, David L. (ed.), "44 - Pericardiocentesis", Cardiac Intensive Care (Third Edition), Philadelphia: Elsevier, pp. 461–464.e1, doi:10.1016/b978-0-323-52993-8.00044-8, ISBN 978-0-323-52993-8.

PERICARDIOCENTESIS

Contents

Pericardiocentesis

Pericardiocentesis (PCC), also called pericardial tap, is a medical procedure where fluid is aspirated from the pericardium (the sac enveloping the heart).

Uses

Cardiac tamponade

Pericardiocentesis can be used to diagnose and treat cardiac tamponade. Cardiac tamponade is a medical emergency in which excessive accumulation of fluid within the pericardium (pericardial effusion) creates increased pressure.[3] This prevents the heart from filling normally with blood. This can critically decrease the amount of blood that is pumped from the heart, causing obstructive shock, which can be lethal. The removal of the excess fluid reverses this dangerous process, and is often the first treatment for cardiac tamponade due to its speed.

Analysis of pericardial fluid

It can also be used to analyze the fluid surrounding the heart. Fluid may be analysed to differentiate a number of conditions, including.

- infection
- spread of cancer
- autoimmune conditions, such as lupus and rheumatoid arthritis

Pericarditis

Pericardiocentesis can relieve the symptoms of pericarditis. There may be a normal amount of pericardial fluid, but inflammation still causes compression of the heart. Removal of some of this fluid reduces pressure on the heart.

What is pericarditis?

Pericarditis is an inflammation of the pericardium. Pericarditis is usually acute – it develops suddenly and may last up to several months. The condition usually clears up after 3 months, but sometimes attacks can come and go for years. When you have pericarditis, the membrane around your heart is red and swollen, like the skin around a cut that becomes inflamed. Sometimes there is extra fluid in the space between the pericardial layers, which is called pericardial effusion. Pericarditis can affect anyone, but it is most common in men aged 16 to 65.

SYMPTOMS AND CAUSES

What are the symptoms of pericarditis?

Pericarditis can cause chest pain that:

- Is sharp and stabbing (caused by the heart rubbing against the pericardium)
- May get worse when you cough, swallow, take deep breaths or lie flat
- Feels better when you sit up and lean forward

You also may feel the need to bend over or hold your chest to breathe more comfortably.

Other symptoms include:

- Pain in your back, neck or left shoulder Trouble breathing when you lie down
- A dry cough

- Anxiety or fatigue

Pericarditis can cause swelling in your feet, legs and ankles. This swelling may be a symptom of constrictive pericarditis. This is a serious type of pericarditis where the pericardium gets hard and/or thick. When this happens, the heart muscle can't expand, and it keeps your heart from working like it should. Your heart can become compressed, which causes blood to back up into your lungs, abdomen and legs, and cause swelling. You can also develop an abnormal heart rhythm.

If you have symptoms of constrictive pericarditis, including shortness of breath, swelling of the legs and feet, water retention, heart palpitations, and severe swelling of the abdomen, call your cardiologist to schedule an evaluation.

Pericardial effusion and cardiac tamponade

When there is a fluid build-up in the space between the pericardium, it can cause a condition called pericardial effusion. If the fluid builds up quickly, it can cause cardiac tamponade. This is a sudden build-up of fluid in between the layers of the pericardium that keeps your heart from working like it should and can cause your blood pressure to drop. Cardiac tamponade is life-threatening and requires immediate drainage of the fluid.

If you have any symptoms of acute pericarditis, call your doctor right away. If you feel your symptoms are a medical emergency, call 911 right away to get treatment at the nearest hospital.

What causes pericarditis?

There are many causes of pericarditis:

- Viral pericarditis is caused by a complication of a viral infection, most often a gastrointestinal virus.
- Bacterial pericarditis is caused by a bacterial infection, including tuberculosis.
- Fungal pericarditis is caused by a fungal infection.
- Parasitic pericarditis is caused by an infection from a parasite.
- Some autoimmune diseases, such as lupus, rheumatoid arthritis and scleroderma can cause pericarditis. Other causes of pericarditis include injury to the chest, such as after a car accident (traumatic

pericarditis), other health problems such as kidney failure (uremic pericarditis), and tumors, genetic diseases such as Familial Mediterranean Fever (FMF), or rarely, medications that suppress the immune system.

Your risk of pericarditis is higher after a heart attack, heart surgery (postpericardiotomy syndrome), radiation therapy or a percutaneous treatment, such as cardiac catheterization or radiofrequency ablation (RFA). In these cases, it is likely that the inflammation of the pericardium is an error in the body's response to the procedure or condition. It can sometimes take several weeks for symptoms of pericarditis to develop after bypass surgery.

Many times, the cause of pericarditis is unknown. This is called idiopathic pericarditis.

About 15-30% of patients with pericarditis have repeat episodes of pericarditis that come and go for many years.

DIAGNOSIS AND TESTS

How is pericarditis diagnosed?

Sharp pain in the chest and back of the shoulders and difficulty breathing are 2 major clues that you may have pericarditis rather than a heart attack. Your doctor will talk to you about your symptoms and medical history, such as whether you have recently been sick and review your history of heart conditions, surgery and other health problems that could put you at a higher risk of pericarditis.

Your doctor will listen to your heart. Pericarditis can cause a rubbing or creaking sound, caused by the rubbing of the inflamed lining of the pericardium. This is called the "pericardial rub" and is best heard when you lean forward, hold your breath and breathe out. Depending on how bad the inflammation is, your doctor may also hear crackles in your lungs, which are signs of fluid in the space around the lungs or extra fluid in the pericardium.

Cleveland Clinic imaging specialists in the Center for the Diagnosis and Treatment of Pericardial Diseases often use a variety of ways to check for pericarditis and any complications, such as pericardial effusion or constrictive pericarditis. You may need one or more tests, such as:

- Chest X-ray to see the size of your heart and any fluid in your lungs.
- Electrocardiogram (ECG or EKG) to look for changes in your heart rhythm. In about half of all patients with pericarditis, the heart rhythm goes through a sequence of four distinct patterns. Some patients do not have any changes, and if they do, they may be temporary.
- Echocardiogram (echo) to see how well your heart is working and check for fluid or pericardial effusion around the heart. An echo will show the classic signs of constrictive pericarditis, including a stiff or thick pericardium that constricts the heart's normal movement.
- Cardiac MRI to check for extra fluid in the pericardium, pericardial inflammation or thickening, or compression of the heart. A contrast agent called gadolinium is used during this highly specialized test.
- CT scan to look for calcium in the pericardium, fluid, inflammation, tumors and disease of the areas around the heart. Iodine dye is used during the test to get more information about the inflammation. This is an important test for patients who may need surgery for constrictive pericarditis.
- Cardiac catheterization to get information about the filling pressures in the heart. This is used to confirm a diagnosis of constrictive pericarditis.

Blood tests can be used to make sure you are not having a heart attack, to see how well your heart is working, test the fluid in the pericardium and help find the cause of pericarditis. If you have pericarditis, it is common for your sedimentation rate (ESR) and ultra-sensitive C reactive protein levels (markers of inflammation) to be higher than normal. You may need other tests to check for autoimmune diseases like lupus and rheumatoid arthritis.

Contra-indications

Long-term drainage

Pericardiocentesis is a one-off procedure, which may not be appropriate for long-term drainage. In cases where longer term drainage is needed, the cardiothoracic surgeon can create a pericardial window. This involves the removal of a section of the pericardium, and the placement of a chest tube.

Aortic dissection

Pericardiocentesis is not appropriate if cardiac tamponade is associated with aortic dissection. In this case, there is a high risk of the procedure worsening this aortic dissection by causing hemorrhage.

Diagnosis of pericardial effusion

Pericardiocentesis is not usually useful for diagnosis of more minor pericardial effusion.

Risks

Less than 1.5% of patients experience complications from Pericardiocentesis. The most common complications are lacerations of coronary arteries, and puncture of the left ventricle (with associated bleeding from both). Echocardiograms can help to identify complications. Blind approaches are typically only advised in emergencies, and a guided approach is typically preferred (using echocardiography).

Technique

Position

The patient undergoing Pericardiocentesis is positioned supine with the head of the bed raised between a 30 and 60 degree angle. This places the heart in proximity to the chest wall for easier insertion of the needle into the pericardial sac. Anatomically, the procedure is carried out under the xiphoid process, up and leftwards.

Process

Pericardiocentesis is usually performed using a local anaesthetic. A wide-bore catheter is inserted. More modern procedures may be performed in a cardiac catheterization lab.

There are two locations that Pericardiocentesis can be performed without puncturing the lungs.

The most standard location is through the infrasternal angle and is also called subxiphoid approach. The needle is inserted at an angle between 30 and 45 degrees to the chest.

Another location is through the 5th or 6th intercostal space at the left sternal border at the cardiac notch of the left lung, and is also called as parasternal approach. The needle is inserted at an angle of 90 degrees to the chest. Some evidence suggests that this poses lower risk of vascular damage in adults.

Intraoperative assessment

Pericardiocentesis is generally done under ultrasound guidance to minimize complications. An electrocardiogram (ECG) is continuously recorded during Pericardiocentesis to assess for complications.

The Pericardium

The pericardium is a thin, two-layered, fluid-filled sac that covers the outer surface of the heart. It provides lubrication for the heart, shields the heart from infection and malignancy, and contains the heart in the chest wall. It also keeps the heart from over-expanding when blood volume increases, which keeps the heart functioning efficiently.

MANAGEMENT AND TREATMENT

What treatments are available for patients with pericarditis?

Medications

Treatment for acute pericarditis may include medication for pain and inflammation, such as ibuprofen and aspirin. Depending on the cause of your pericarditis, you may need an antibiotic or antifungal medication.

If your symptoms are severe, last longer than 2 weeks, or clear up and then return, your doctor may also prescribe an anti-inflammatory drug called colchicine. Colchicine can help control the inflammation and prevent pericarditis from returning weeks or even months later.

If you need to take large doses of ibuprofen, your doctor may prescribe medications to ease gastrointestinal symptoms. If you take large doses of

nonsteroidal anti-inflammatory drugs (NSAIDs), you will need frequent follow-up appointments to look for changes in your kidney and liver function.

If you have chronic or recurrent pericarditis, you may need to take NSAIDs or colchicine for several years, even if you feel well. A diuretic ("water pill") usually helps get rid of the extra fluid caused by constrictive pericarditis. If you develop a heart rhythm problem, your doctor will talk to you about treatment.

Your doctor may also talk to you about treatment with steroids or other medications, such as azathioprine, IV human immunoglobulin, and anaconda.

Other treatments

Most times, medications are the only treatment needed for patients with pericarditis. But, if fluid builds up in the pericardium and compresses the heart, you may need a procedure called Pericardiocentesis. A long, thin tube called a catheter is used to drain the extra fluid. The catheter and a needle are guided to the pericardium with the use of echocardiography. If the fluid cannot be drained with the needle, a surgical procedure called a pericardial window is performed.

If you have constrictive pericarditis, you may need to have some of your pericardium removed. The surgery is called a pericardiectomy.

Surgery is not usually used as treatment for patients with recurrent pericarditis, but your doctor may talk to you about it if other treatments aren't successful.

Here are some key points about pericarditis. More detail and supporting information is in the main article.

- Pericarditis is a swelling of the pericardium, a sack-like tissue that contains the heart.
- The condition can have a number of causes, including bacterial or viral infection, parasites, or fungus.
- Most commonly, pericarditis is due to a virus.

- Symptoms of pericarditis include palpitations, a dry cough, and pain in the shoulder.
- In rare cases, pericarditis can permanently scar the pericardium.

SRI LAKSHMI NARAYANA INSTITUTE OF ALLIED HEALTH SCIENCE

MEDICAL EDUCATIONAL PROJECT

Pericardiocentesis - VAC02/AHS/2019-16/09

SlNo.	Name of the Students	University Register Number	Signature
1	**AKSHARA S**	**UAH1902203**	
2	**ANGEL ABRAHAM**	**UAH1902204**	
3	**ASWIN S**	**UAH1902205**	
4	**ATHIRA S RAJ**	**UAH1902206**	
5	**BARANI U**	**UAH1902207**	
6	**BUVANESWARI V**	**UAH1902208**	
7	**ELANTHIRAIYAN NS**	**UAH1902209**	
8	**GETZI R**	**UAH1902210**	
9	**GNANARITHICA G**	**UAH1902211**	
10	**GOKULDASSAN A**	**UAH1902212**	
11	**HARIHARASUDAN RM**	**UAH1902213**	
12	**HARINI H**	**UAH1902214**	
13	**INDUMATHI K**	**UAH1902215**	
14	**JAGADESHWARAN S**	**UAH1902216**	
15	**JANANI M**	**UAH1902217**	
16	**KHAMIL MUBARAK P**	**UAH1902218**	
17	**KANIMOZHI G**	**UAH1902219**	
18	**KARUPPASAMY P**	**UAH1902220**	
19	**KAVYAMADHU**	**UAH1902221**	
20	**KRISHNA S .RAJU**	**UAH1902222**	
21	**MALLO DIPUNG**	**UAH1902223**	
22	**MINNU PRASAD**	**UAH1902224**	
23	**NANDHINI R**	**UAH1902225**	
24	**NAVYA R**	**UAH1902226**	

25	**NILA K**	**UAH1902227**	
26	**NIRANJAN DEVI D**	**UAH1902228**	
27	**PAVITHRA P**	**UAH1902229**	
28	**PEMMADA JEEVAN PRAMOD**	**UAH1902230**	
29	**PETREESHIA RUBINI A**	**UAH1902231**	
30	**PRAVEEN KUMAR K**	**UAH1902232**	

SRI LAKSHMI NARAYANA INSTITUTE OF ALLIED HEALTH SCIENCE

MEDICAL EDUCATIONAL PROJECT

Pericardiocentesis - VAC02/AHS/2019-16/09

SlNo.	Name of the Students	University Register Number	Signature
1	AKSHARA S	UAH1902203	
2	ANGEL ABRAHAM	UAH1902204	
3	ASWIN S	UAH1902205	
4	ATHIRA S RAJ	UAH1902206	
5	BARANI U	UAH1902207	
6	BUVANESWARI V	UAH1902208	
7	ELANTHIRAIYAN NS	UAH1902209	
8	GETZI R	UAH1902210	
9	GNANARITHICA G	UAH1902211	
10	GOKULDASSAN A	UAH1902212	
11	HARIHARASUDAN RM	UAH1902213	
12	HARINI H	UAH1902214	
13	INDUMATHI K	UAH1902215	
14	JAGADESHWARAN S	UAH1902216	
15	JANANI M	UAH1902217	
16	KHAMIL MUBARAK P	UAH1902218	
17	KANIMOZHI G	UAH1902219	
18	KARUPPASAMY P	UAH1902220	
19	KAVYAMADHU	UAH1902221	
20	KRISHNA S .RAJU	UAH1902222	
21	MALLO DIPUNG	UAH1902223	
22	MINNU PRASAD	UAH1902224	
23	NANDHINI R	UAH1902225	
24	NAVYA R	UAH1902226	

25	**NILA K**	**UAH1902227**	
26	**NIRANJAN DEVI D**	**UAH1902228**	
27	**PAVITHRA P**	**UAH1902229**	
28	**PEMMADA JEEVAN PRAMOD**	**UAH1902230**	
29	**PETREESHIA RUBINI A**	**UAH1902231**	
30	**PRAVEEN KUMAR K**	**UAH1902232**	

SRI LAKSHMI NARAYANA INSTITUE OF HIGHER EDUCATON AND RESEARCH

Annexure - III

Assessment Form

Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry

Course code: VAC02/AHS/2019-16/09

Multiple Choice Question 10x2=20

1. What is the characteristic appearance of heart in cardiac tamponade?

   a. figure of 8 appearance
   b. wer vase heart
   c. coren sabot
   d. tear bottle heart

2. The three most common causes of cardiac tamponade are all accept?

   a. neoplastic disease
   b. idiopathic pericarditis
   c. pericardial effusion
   d. cardiac catheterization

3. What is the characteristic triad associated with cardiac tamponade?

   a. beck's triad
   b. sandblom's triad
   c. whipple's triad
   d. murphy's triad

4. All of the following are features of beck's triad except?

   a. soft or absent heart sounds
   b. hypotension
   c. jugular venous distension
   d. prominent y descent

5. All of the following are true about cardiac tamponade except?

   a. it can result by even 200 ml of fluid in the pericardial space , if it develops rapidly
   b. in slowly developing effusions more than 2000 ml of fluid can exist in the pericardial space
   c. the volume of fluid required to produce cardiac tamponade varies directly with the thickness of

the ventricular myocardium
d. the volume of fluid required to produce cardiac tamponade varies directly with the thickness of parietal pericardium

6. Which of these features aid in the diagnosis of cardiac tamponade?

a. Pulse paradoxes
b. Enlarged heart on chest radiograph
c. A kinesis of left ventricular wall on echocardiography
d. Low amplitude ECG voltage
e. Quiet heart sounds

7. The following are true regarding pericardial fluid:

a. its presence always confirms the diagnosis of tamponade
b. The normal volume of pericardial fluid is 15-20ml
c. Echocardiographic estimation of pericardial fluid volume strongly predicts clinical haemodynamic compromise
d. It has an exponential pressure volume relationship
e. Pericardiocentesis is only diagnostic in the management of cardiac tamponade

8. The following are true regarding the management of cardiac tamponade:

a. Pericardiocentesis is indicated in all forms of cardiac tamponade
b. Treatment involves careful fluid resuscitation and inotropes
c. Echocardiographic evidence of chamber collapse predicts a positive fluid responsiveness
d. Emergency drainage is indicated in tamponade with incipient cardiac arrest
e. Once the pericardial effusion is drained it may be necessary to wean infusions of inotropes and vasopressors

9. Which of the following is least likely to cause constrictive pericarditis

a. Tuberculosis pericardial effusion
b. Staphylococcal effusion
c. Post cardiac surgery
d. acute rheumatic fever

10. A type of pericarditis that's known for sharp chest pains.

a. TB Pericarditis
b. Constrictive Pericarditis
c. Fibrous Pericarditis

SRI LAKSHMI NARAYANA INSTITUE OF HIGHER EDUCATON AND RESEARCH

Nandhini.R.
URN 1902225

SRI LAKSHMI NARAYANA INSTITUE OF HIGHER EDUCATON AND RESEARCH

Annexure - III

Assessment Form

Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry

Course code: VAC02/AHS/2019-16/09

Multiple Choice Question 10x2=20

1. What is the characteristic appearance of heart in cardiac tamponade?

   a. figure of 8 appearance
   b. wer vase heart
   c. coren sabot
   d. tear bottle heart

2. The three most common causes of cardiac tamponade are all accept?

   a. neoplastic disease
   b. idiopathic pericarditis
   c. pericardial effusion
   d. cardiac catheterization

3. What is the characteristic triad associated with cardiac tamponade?

   a. beck's triad
   b. sandblom's triad
   c. whipple's triad
   d. murphy's triad

4. All of the following are features of beck's triad except?

   a. soft or absent heart sounds
   b. hypotension
   c. jugular venous distension
   d. prominent y descent

5. All of the following are true about cardiac tamponade except?

   a. it can result by even 200 ml of fluid in the pericardial space , if it develops rapidly
   b. in slowly developing effusions more than 2000 ml of fluid can exist in the pericardial space
   c. the volume of fluid required to produce cardiac tamponade varies directly with the thickness of

SRI LAKSHMI NARAYANA INSTITUE OF HIGHER EDUCATON AND RESEARCH

the ventricular myocardium
d. the volume of fluid required to produce cardiac tamponade varies directly with the thickness of parietal pericardium

6. Which of these features aid in the diagnosis of cardiac tamponade?

a. Pulse paradoxes
b. Enlarged heart on chest radiograph
c. A kinesis of left ventricular wall on echocardiography
d. Low amplitude ECG voltage
e. Quiet heart sounds

7. The following are true regarding pericardial fluid:

a. its presence always confirms the diagnosis of tamponade
b. The normal volume of pericardial fluid is 15-20ml
c. Echocardiographic estimation of pericardial fluid volume strongly predicts clinical haemodynamic compromise
d. It has an exponential pressure volume relationship
e. Pericardiocentesis is only diagnostic in the management of cardiac tamponade

8. The following are true regarding the management of cardiac tamponade:

a. Pericardiocentesis is indicated in all forms of cardiac tamponade
b. Treatment involves careful fluid resuscitation and inotropes
c. Echocardiographic evidence of chamber collapse predicts a positive fluid responsiveness
d. Emergency drainage is indicated in tamponade with incipient cardiac arrest
e. Once the pericardial effusion is drained it may be necessary to wean infusions of inotropes and vasopressors

9. Which of the following is least likely to cause constrictive pericarditis

a. Tuberculosis pericardial effusion
b. Staphylococcal effusion
c. Post cardiac surgery
d. Acute rheumatic fever

10. A type of pericarditis that's known for sharp chest pains.

a. TB Pericarditis
b. Constrictive Pericarditis
c. Fibrous Pericarditis

SRI LAKSHMI NARAYANA INSTITUE OF HIGHER EDUCATON AND RESEARCH

Akshara. S
URH19022203

SRI LAKSHMI NARAYANA INSTITUE OF HIGHER EDUCATON AND RESEARCH

Annexure - III

Assessment Form

Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry

Course code: VAC02/AHS/2019-16/09

Multiple Choice Question 10x2=20

1. What is the characteristic appearance of heart in cardiac tamponade?

   a. figure of 8 appearance
   b. wer vase heart
   c. coren sabot
   d. tear bottle heart

2. The three most common causes of cardiac tamponade are all accept?

   a. neoplastic disease
   b. idiopathic pericarditis
   c. pericardial effusion
   d. cardiac catheterization

3. What is the characteristic triad associated with cardiac tamponade?

   a. beck's triad
   b. sandblom's triad
   c. whipple's triad
   d. murphy's triad

4. All of the following are features of beck's triad except?

   a. soft or absent heart sounds
   b. hypotension
   c. jugular venous distension
   d. prominent y descent

5. All of the following are true about cardiac tamponade except?

   a. it can result by even 200 ml of fluid in the pericardial space , if it develops rapidly
   b. in slowly developing effusions more than 2000 ml of fluid can exist in the pericardial space
   c. the volume of fluid required to produce cardiac tamponade varies directly with the thickness of

SRI LAKSHMI NARAYANA INSTITUE OF HIGHER EDUCATON AND RESEARCH

the ventricular myocardium
d. the volume of fluid required to produce cardiac tamponade varies directly with the thickness of parietal pericardium

6. Which of these features aid in the diagnosis of cardiac tamponade?

a. Pulse paradoxes
b. Enlarged heart on chest radiograph
c. A kinesis of left ventricular wall on echocardiography
d. Low amplitude ECG voltage
e. Quiet heart sounds

7. The following are true regarding pericardial fluid:

a. its presence always confirms the diagnosis of tamponade
b. The normal volume of pericardial fluid is 15-20ml
c. Echocardiographic estimation of pericardial fluid volume strongly predicts clinical haemodynamic compromise
d. It has an exponential pressure volume relationship
e. Pericardiocentesis is only diagnostic in the management of cardiac tamponade

8. The following are true regarding the management of cardiac tamponade:

a. Pericardiocentesis is indicated in all forms of cardiac tamponade
b. Treatment involves careful fluid resuscitation and inotropes
c. Echocardiographic evidence of chamber collapse predicts a positive fluid responsiveness
d. Emergency drainage is indicated in tamponade with incipient cardiac arrest
e. Once the pericardial effusion is drained it may be necessary to wean infusions of inotropes and vasopressors

9. Which of the following is least likely to cause constrictive pericarditis

a. Tuberculosis pericardial effusion
b. Staphylococcal effusion
c. Post cardiac surgery
d. Acute rheumatic fever

10. A type of pericarditis that's known for sharp chest pains.

a. TB Pericarditis
b. Constrictive Pericarditis
c. Fibrous Pericarditis

Sri Lakshmi Narayana Institute of Medical Sciences

Affiliated to Bharath Institute of Higher Education & Research

(Deemed to be University under section 3 of the UGC Act 1956)

CERTIFICATE OF MERIT

This is to certify that **JANANI M (UAH1902217)** has actively participated in the Value Added Course on **Pericardiocentesis**(VAC02/AHS/2019-16/09) held during month Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

RESOURCE PERSON

Dr. G.Somasundram

COORDINATOR

Sri Lakshmi Narayana Institute of Medical Sciences

Affiliated to Bharath Institute of Higher Education & Research

(Deemed to be University under section 3 of the UGC Act 1956)

CERTIFICATE OF MERIT

This is to certify that **GETZI R(UAH1902210)** has actively participated in the Value Added Course on **Pericardiocentesis**(VAC02/AHS/2019-16/09) held during month Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

RESOURCE PERSON

Dr. G.Somasundram

COORDINATOR

5Annexure- V

Student Feedback Form

Course Name: Pericardiocentesis

Subject Code: VAC02/AHS/2019-16/09

Name of Student: _____Roll No.:

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Feedback Form

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. The course met my expectations.	○	○	○	○	○
2. I will be able to apply the knowledge learned.	○	○	○	○	○
3. The course objectives for each topic were identified and followed.	○	○	○	○	○
4. The content was organised and easy to follow.	○	○	○	○	○
5. The quality of instruction was good.	○	○	○	○	○
6. Class participation and interaction were encouraged.	○	○	○	○	○
7. Adequate time was provided for questions and discussion.	○	○	○	○	○

8. How do you rate the course overall?
   - ○ Excellent
   - ○ Good
   - ○ Average
   - ○ Poor
   - ○ Very poor

9. The aspects of the course could be improved?

10. Other comments?

Signature of the student:
Date:

5Annexure- V

Student Feedback Form

Course Name: Pericardiocentesis

Subject Code: VAC02/AHS/2019-16/09

Name of Student: ASWIN S Roll No.: 180190220S

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Feedback Form

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. The course met my expectations.	✓	○	○	○	○
2. I will be able to apply the knowledge learned.	○	✓	○	○	○
3. The course objectives for each topic were identified and followed.	✓	○	○	○	○
4. The content was organised and easy to follow.	○	✓	○	○	○
5. The quality of instruction was good.	✓	○	○	○	○
6. Class participation and interaction were encouraged.	✓	○	○	○	○
7. Adequate time was provided for questions and discussion.	✓	○	○	○	○

8. How do you rate the course overall?
   - ✓ Excellent
   - ○ Good
   - ○ Average
   - ○ Poor
   - ○ Very poor

9. The aspects of the course could be improved?

10. Other comments? No
The class was good.

Signature of the student: Aswin.

Date: 12/9/19

5Annexure- V

Student Feedback Form

Course Name: **Pericardiocentesis**

Subject Code: VAC02/AHS/2019-16/09

Name of Student: Geetu Roll No.: DAH190222

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Feedback Form

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. The course met my expectations.	✓	○	○	○	○
2. I will be able to apply the knowledge learned.	○	✓	○	○	○
3. The course objectives for each topic were identified and followed.	✓	○	○	○	○
4. The content was organised and easy to follow.	✓	○	○	○	○
5. The quality of instruction was good.	○	✓	○	○	○
6. Class participation and interaction were encouraged.	○	✓	○	○	○
7. Adequate time was provided for questions and discussion.	✓	○	○	○	○

8. How do you rate the course overall?
   - ✓ Excellent
   - ○ Good
   - ○ Average
   - ○ Poor
   - ○ Very poor

9. The aspects of the course could be improved?

10. Other comments? NO

The way of teaching was good.

Signature of the student:
Date: 12/9/19

Date: 15.09.2017

From

Dr.G.Somasundram
Department of Pharmacology,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

Through Proper Channel

To

The Dean,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

Sub: Completion of value-added course: Pericardiocentesis

Dear Sir,

With reference to the subject mentioned above, the department has conducted the value-added course titled: "**Pericardiocentesis"** September to October 2019 for 30 AHS Students. We solicit your kind action to send certificates for the participants that is attached with this letter. Also, I am attaching the photographs captured during the conduct of the course.

Kind Regards,

Dr.G.Somasundram

Encl: Certificates

Photographs