MHIF FEATURED STUDY: Complexa PH

DESCRIPTION:
Purpose of the study is to determine the efficacy and safety of CXA-10 in patients with pulmonary arterial hypertension. Primary endpoints include change in RVEF by cardiac MRI and change in PVR by right heart catheterization. CXA-10 is different from currently available PAH therapy as it works through anti-oxidant, anti-inflammatory and anti-fibrotic activity.

CRITERIA LIST/QUALIFICATIONS:

Inclusion
- Diagnosis of pulmonary arterial hypertension on stable background therapy, including PDE5 inhibitors, ERAs, etc.

Exclusion
- Significant co-morbidities or recently medically unstable
- Diagnosed with atrial fibrillation (AF)

OPEN AND ENROLLING: Please Refer Patients!

CONDITION: Pulmonary arterial hypertension (PAH)
PI: Eric Fenstad, MD
RESEARCH CONTACT: Sarah Dennis
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SPONSOR: Complexa

Pulmonary arterial hypertension is uncommon; however, the 5-year survival rate for patients is only 57 percent. Ongoing research is important for patients!
Minneapolis Heart Institute Foundation® Cardiovascular Grand Rounds

Title: Case Carousel – Dilemmas
Speaker: Moses Wananu, MD, Cardiovascular Disease Fellow
Minneapolis Heart Institute® at Abbott Northwestern Hospital & Hennepin County Medical Center

Date: March 25, 2019
Time: 7:00 – 8:00 AM
Location: ANW Education Building, Watson Room

OBJECTIVES
At the completion of this activity, the participants should be able to:
1. Weigh treatment options for severe pulmonary HTN in mitral stenosis.
2. Review treatment options for pulmonary artery aneurysm.
3. Discuss treatment options for endocarditis with limited resources.

ACCREDITATION
Physician - Allina Health is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. Allina Health designates this live activity for a maximum of 1.0 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Nurse - This activity has been designed to meet the Minnesota Board of Nursing continuing education requirements for 1.0 hours of credit. However, the nurse is responsible for determining whether this activity meets the requirements for acceptable continuing education.

DISCLOSURE POLICY & STATEMENTS
Allina Health, Learning & Development intends to provide balance, independence, objectivity and scientific rigor in all of its sponsored educational activities. All speakers and planning committee members participating in sponsored activities and their spouse/partner are required to disclose to the activity audience any real or apparent conflict(s) of interest related to the content of this conference.

The ACCME defines a commercial interest as “any entity” producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients. The ACCME does not consider providers of clinical service directly to patients to be commercial interests - unless the provider of clinical service is owned, or controlled by, an ACCME-defined commercial interest.

Moderator(s)/Speaker(s)
Dr. Moses Wananu has disclosed that he DOES NOT have any real or apparent conflicts with any commercial interest as it relates to presenting his content in this activity/course.

Planning Committee
Dr. Alex Campbell, Jake Cohen, Jane Fox, Dr. Mario Gössl, Dr. Kevin Harris, Dr. Kasia Hryniewicz, Rebecca Lindberg, Amy McMeans, Dr. Michael Miedema, Dr. JoEllyn Moore, Pamela Morley, Dr. Scott Sharkey, and
Jolene Bell Makowesky have disclosed that they DO NOT have any real or apparent conflicts with any commercial interest as it relates to the planning of this activity/course. Dr. David Hurrell has disclosed the following relationship -Boston Scientific: Chair, Clinical Events Committee.

**NON-ENDORSEMENT OF COMMERCIAL PRODUCTS AND/OR SERVICES**

We would like to thank the following company for exhibiting at our activity.

- **Astellas Pharma**
- **Sanofi Genzyme**

Accreditation of this educational activity by Allina Health does not imply endorsement by Allina Learning & Development of any commercial products displayed in conjunction with an activity.

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**PLEASE SAVE YOUR SERIES FLIER**

When you request a transcript this serves as your personal tracking of activities attended. Most professional healthcare licensing/certification boards **will not accept** a Learning Management System (LMS) transcript as proof of credit; there are too many LMS’s across the country and their validity/reliability are always in question.

If audited by a licensing board or submitting for license renewal or certification renewal, boards will ask you not the entity providing the education for specific information on each activity you are using for credit. You will need to demonstrate that you attended the activity with a copy of **your certificate/evidence of attendance, a brochure/flier and/or the conference handout**.

Each attendee at an activity is responsible for determining whether an activity meets their requirements for acceptable continuing education and should only claim those credits that he/she actually spent in the activity.

**Maintaining these details are the responsibility of the individual.**

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Case Carousel - Dilemmas

international trip

Moses Wananu, MD
Cardiology Fellow
Case 1 “Incidental”

- 21 y/o presenting with one week fatigue. He plays soccer but was stopping more often.
- One month prior had pneumonia that was treated.
- Night sweat and intermittent chills.
- No medications
- No other medical hx

EKG
### Treatment

- Admitted to ICU
- Started on broad spectrum antibiotics
- Surgery consult.
- Continue antibiotics pray/hope gets better.
- 45% in hospital and 58.4% 1 year mortality in medical vs 21% and 29.1% respectively in early surgery. (International Collaboration on Endocarditis Prospective Cohort Study).

### Timing of Surgery in IE AHA/ACC and ESC

- Class I indication (Early Surgery).
- Heart failure
- Uncontrolled infection
- Prevention of embolization
Timing of Surgery in IE AHA/ACC and ESC

- **Heart failure**
  - AHA/ACC (2014) early surgery (ES) – valve dysfunction causing HF
  - ESC 2009 – Emergent surgery (EMS) – refractory PE or cardiogenic shock.

- **Uncontrolled infection**
  - AHA/ACC ES – persistent infection (5-7 of abx), HB or abscess or resistant organism (S. aureus, fungi)
  - ESC urgent surgery (US) – abscess, fistula or pseudoaneurysm; enlarging vegetation, persistent fever or +BC after 7-10 d of appropriate therapy.

- **Prevention of embolization.**
  - AHA/ACC ES – No class I. Recurrent emboli and persistent veg. despite appropriate abx (IIa), large veg on native valve (IIb)
  - ESC US – veg >10 mm with previous embolization or other surgical indication. Isolated veg >15 mm and feasible repair (IIb)

Timing of Surgery contd.

- **Neurologic complications**
  - Concern for significant risk for perioperative neurological deterioration (related to AC and intracerebral bleeding, hypotension)
  - Possible imaging, MRI etc. No clear statement.
Drive carefully – share the road

Case 2 “I don’t believe that!!”

- 23 y/o male presenting for follow up of shortness of breath. Has history of RHD.
- Walked to the clinic but visibly short of breath.
- Medications
  - Atenolol 25 mg daily.
  - He is on Sildenafil 20 mg TID.
  - Furosemide 40 mg BID
PA pressure!! Real?
MV mean gradient
Management

- Admission to hospital
- Medications?
- Urgent/Emergent surgery?
- Mild delay in starting any medications.
- Frothy blood tinged sputum
- Died shortly afterwards.

AHA/ACC 2014 Valve Guideline
Management questions

- From the two cases and many others:
- Either late presenting illness
- OR complicated with limited resources.
- Disease burden is too high for any single hospital.
- Stretched out to the limit and unfortunately a lot don’t get the care they desperately need.

Even the animals feel it.
Even the animals feel it.

Case 3 “1st successfully treated in East Africa”.

- 7 year old boy with distended abdomen and pain for a few months
- Appears small for his age.
- Intellectual disability (former mental retardation).
- Plop sound on auscultation.
Mass being pulled back
Causes of Masses in IVC to RA

- Thrombus
- Intraabdominal malignancies.
  - Renal cell carcinoma
  - Adrenal
  - Hepatocellular
- Our patient was Nephroblastoma (wilm’s tumor)
  - 1-4% in pts with Wilms tumor
Case 4 “Happy Mother”

- 25 y/o female with history of RHD with severe mitral valve stenosis and severe regurgitation.
- Heart failure
- s/p Prosthetic Mitral Valve replacement. Had desire to have children.
- Had successful delivery and is 1 year out after surgery. Comes back for check up.
- Denies significant symptoms. Some SOB
Management

- Hemodynamically “stable”
- Coming back for surgery in 2 months.
- Furosemide to be started and Losartan.
- No further pregnancy.

Case 5 “what’s that”

- 50 y/o male presenting with productive cough of 2 weeks duration.
- Minimal orthopnea but no signs of heart failure.
- Has been taking over the counter medications without relief.
CXR

Attempt at 5 chamber
Pulmonary Aneurysm.

Using CT upper limit of normal
- Main PA 29 mm and interlobar PA 17 mm
- Diameter > 40 mm, pulmonary aneurysm diff than ectasia.

Causes
- Congenital heart disease with pHTN.
- Acquired
  - Infection – TB, pyogenic bacteria
  - Vasculitis
  - pHTN, chronic PE, pulmonary mets or neuplasm
  - Connective tissue disease.
  - Iatrogenic
  - Idiopathic

Pulmonary aneurysm Treatment

- No clear guideline for the best therapeutic approach.
- For the most part conservative approach if normal PA pressures.
- Consideration for surgery.
  - Pulmonary trunk aneurysm >5.5 cm or >5mm increase in diameter in 6 months.
  - Especially with evidence of valvular pathology, shunt flow or verification of PAH
  - Compression of adjacent structures
  - Thrombus formation in the aneurysm sack
  - Clinical symptoms
Reflection:

Thank You!!