Hackensack Meridian Health Research Day 2020  
Tuesday, June 9, 2020

General Guidelines for Abstract Submission

Instructions for Submission

- All of the author information and Abstract contents must be entered using the Hackensack Meridian Health Research Day Abstract Submission web page.
- The deadline for abstract submission is Friday, March 20, 2020, 5:00 PM.
- Each abstract should follow the specified format based on its type:
  - Original Research (Example on Page 4 of this document) or
  - Case Report / Clinical Vignette (Example on Page 5)
  - Detailed instructions are provided below
- You can type the contents directly into the designated space on the submission page, or copy and paste from your pre-prepared document.
  - You cannot copy and paste if you access the submission page via Meridian Health Dashboard. You need to access from Intranet or Internet directly.
  - Please do not type the section titles of your abstract.
- Abstract should NOT include the patient’s name, medical record number, or any other information that could be used to identify the patient.
- Abstracts for research projects involving human subjects without IRB approval will not be accepted. The committee has the right to request proof of IRB approval before accepting the abstract.
- The limit for the whole abstract (including title, author information and abstract contents) is 3,500 characteristics (including space).
  - The online submission can only take plain text.
  - You cannot submit images, graphs, or tables.
- You will have a chance to preview your abstract before submitting the abstract.
- Multiple submissions from an author are welcome. Each Abstract should be submitted separately.
- If you have any questions, please contact the Office of Research Administration at 732-776-2953.

Detailed Instructions for Format

- If you have special characters which cannot be typed directly from your keyboard, please use alternative expressions to minimize the potential impact to the quality of your submitted abstract.
  - It is likely that the current submission system may created “?” for some special characters.
• Frequently used special characters (suggested alternatives)

- ≥ (>=)
- ≤ (<=)
- ± (+/-)
- – (-)
- ° (degree)
- α (alpha)
- β (beta)
- Δ (delta)
- µ (u)

• Institute/Affiliation Information:
  o Detailed information must be provided in order to be considered for review.
  o To be qualified for abstract review, at least one listed affiliated institution must be part of Hackensack Meridian Health.
  o If authors come from different department or institutes, details of individual affiliation should be provided.
    ▪ Use bracket to indicate the affiliation. See example on Page 3/4 for the appropriate format.

• For Original Research:
  o Use the sections of:
    ▪ Background
      • Brief background sentence explaining the reason the project was initiated. One sentence stating the objective.
    ▪ Methods
    ▪ Results
      • Should relate to the primary objective.
      • Must be complete in order to submit. All submissions without results are automatically disqualified.
    ▪ Conclusions
      • Should relate to the stated objective.

• For Case Report / Clinical Vignette:
  o Use the section of:
    ▪ Learning Objectives
      • 1-2 sentences stated using active language. Start with the words Recognize, Diagnose, Review, Understand…
    ▪ Case Summary
      • Make the information as anonymous as possible. Age ranges rather than the exact age is acceptable. Omit personal/medical/other information that is not related to the primary diagnosis if it could theoretically identify the patient. Use the past tense. Describe the events along a consistent timeline from the beginning to the end. Always start with the history, then the exam, then labs. The exam can be very brief and focused. List units and normal ranges for any labs. Define any abbreviations. Use generic drug names.
    ▪ Conclusion
• You have creative license here. If necessary, present the definition of the disorder. Briefly list findings of prior publications, or the epidemiology of the disease. Discuss the reasoning and/or present the data to support how you reached your clinical diagnosis. Always close with a statement that ties the case together and presents a focused teaching point to the reader.
COMORBID RHEUMATOID ARTHRITIS/COLLAGEN VASCULAR DISEASE ASSOCIATED WITH INCREASED IN-HOSPITAL MORTALITY AFTER ACUTE RESPIRATORY FAILURE

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Background: Patients with rheumatoid arthritis (RA) have a substantially reduced life expectancy which is mainly attributed to cardiovascular disease and infection. Either from underlying disease or as a result of treatment, patients with RA have a high incidence of pulmonary disease, although little about in-hospital mortality after acute respiratory failure (ARF) is known. We sought to compare in-hospital mortality after ARF in patents with RA compared with patients free of RA.

Methods: Adult patients (>= 18 years) who had emergency admission for ARF during 2003-2006 were identified from the US Nationwide Inpatient Sample database. In-hospital mortality is the primary outcome. Multiple logistic regression models were used to assess the association between comorbid rheumatoid arthritis/collagen vascular disease (RACVD) and in-hospital mortality.

Results: There were 82,121 emergency admissions for ARF. Among them, 1,621 (2%) patients had a history of RACVD. Those patients were younger (mean[standard deviation]: 63.6[16.1] vs. 67.1[15.5] years, P<0.0001), more likely to be female (76.8% vs. 52.3%, P<0.0001), but not significantly different in race distribution (P=0.08). The overall mortality was 24.3%. The RACVD patients did not show a significantly higher mortality rate (24.9% vs. 24.3%, P=0.61) from univariate analysis. However, from a multiple logistic regression model, RAVCD patients had a significantly higher chance of mortality (odds ratio: 1.21, 95% confidence interval: [1.07, 1.36], P=0.003), while controlling for gender, race, insurance, admission source, median household income, teaching status, bed size and region of hospital and major comorbidities.

Conclusions: This study found an increased mortality associated with comorbid rheumatoid arthritis/collagen vascular disease.
A STORM IS COMING: THYROTOXIC INDUCED CARDIOMYOPATHY

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Learning Objectives: 1) Recognize the cardiac complications of thyrotoxicosis and appreciate the relative rarity of this complication in younger patients. 2) Diagnose thyrotoxicosis related pulmonary edema in a young woman.

Case Summary: A woman in her 20’s with Graves’ disease stopped her propylthiouracil (PTU) one month ago. She presented to her endocrinologist’s office complaining of fevers, chills, sore throat and palpitations, and was directly admitted to the hospital to receive treatment for Thyroid Storm. EXAM: HR: 120 bpm; thyroid enlarged and tender with a prominent bruit. LABS: normal electrolytes and complete blood count. Free T3 25 pg/dl (2.27-3.57), TSH 0.02 uIU/L (0.34-5.60 and free T4  5.38 ng/dl (0.50-1.26). EKG showed sinus tachycardia at 126 bpm. Therapy for thyroid storm was initiated including I.V. hydrocortisone, PTU followed by potassium iodide, beta-adrenergic blockade, and IV normal saline at 125 cc/hr. Her sore throat and tachycardia improved over 2 days. On day #3 she developed cough, dyspnea during normal speech and orthopnea; she was noted to have hypoxia and ronchi. Chest x-ray revealed new bi-basilar infiltrates consistent with pulmonary edema. Diuresis with furosemide improved her exam and symptoms. An echocardiogram revealed a LVEF of 55-60%, with normal left ventricular wall thickness. She had remarkable clinical improvement and was discharged 2 days later.

Conclusion: Cardiac complications of thyroid storm tend to occur in older patients with atrial fibrillation. A case series of consecutive thyrotoxicosis patients found that heart failure affected 6%. Within that subgroup the mean age was 66, half had an ejection fraction <50%, and 94% had atrial fibrillation [PMID 17005710]. Prolonged sinus tachycardia explained some other cases. Thyrotoxicosis increases the blood volume increasing preload, decreases the peripheral vascular resistance, and increases contractility. These, combined with sinus tachycardia, can predispose to high output failure in the setting of an otherwise normal heart. While this case is unusual given her young age, it is likely that the physiological effects of thyrotoxicosis, combined with 3 days of IV fluid combined to cause high-output heart failure. Her thyroid status was normalizing, so it is unlikely this was a direct consequence of thyroid storm. While pulmonary edema is an infrequent occurrence, especially in such a young patient, we should remain aware of the potential systemic effects of thyrotoxicosis and take steps to minimize the risks.