Creating a Rich Global Health Case Repository for Advancing Global Health Education
Authors Information & Disclosures

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Introduction

Global Health Radiology as adapted from the Journal of the American College of Radiology (JACR) involves using:

radiology outreach to improve health equity with emphasis on low-resource settings and underserved populations.

Health equity is one of the central pillars of ACR’s mission.
Rationale

- Education is a key element of building capacity.
- Simple and centralized access to shared educational content is instrumental to learners who work in those resource-limited settings, including medical students/residents, and faculty.
Goals, Objectives & Methods

- **Goals/Objective:** Create a centralized educational platform designed to share and teach cases encountered in global health.

- **Methods:**
  - Utilize existing tools and methods
  - Case procurement
  - Editing cases
  - Publishing cases
  - Utilizing & leveraging
Pilot: Case Repository in Global Health

ACR Cortex®
- Case interface-inappropriately-Point style presentation.
- Upload templates ensure patient & case data is accurate and categorized
- Automated content upload using a standard radiology report

Standard classifications
- Common structure to assist in content integration & collaboration with other Global Health initiatives
- Content collected & stored becomes compatible with other ACR and Cortex® program content
- ‘Self-service’ collaboration

Pilot study uses cases from the UNC Radiology/Malawi Program
Sample Case Submission

- Common interfaces for collaboration and sharing
- Upload content from a common and obtainable format
  - Eliminate data clean-up and transformation ahead of submission
Learner View-> Portal
Collaborative groups with standardized content can cross-publish cases concurrently for different groups and demographics.

- **Cases** → grouped → **Activity** (e.g., quizzes)
- **Activities** → grouped → **Module** (e.g., can be modality or system based or regional based)
- **Modules** → grouped → **Curriculum** (e.g., Global Health Elective)
Sample Case Presentation

History

Slight left-sided facial droop.

Findings

Low-density markedly heterogeneous lesion, exclusively involving the right frontal lobe, with smooth remodeling of the sinus walls and compression of, without extension into, the right orbit. There is peripheral enhancement seen adjacent, with small nodular components at the internal/external margin (C1).

Differential Diagnosis

1. Primary Brain Neoplasm or Metastasis
2. Infectious/Inflammatory
3. Malignant Neoplasms

Teaching Points

Any cases of obstruction at the level of the anulus (trauma, inflammation, neoplasm) can cause mass effect associated with that sinus, hence, a mucocoele. Mucocoele sinus neoplasms demonstrate smooth exponential remodeling of the bone walls with radiolucency seen on the surface of the bone window phases/enhancement. The peripheral destruction can be seen, however, when isolated peripheral enhancement should prompt for superinfection. In meningococcal patients with increased exudative symptoms, local pain, fever, neck stiffness, and rapid deterioration.
Global Health Learners: Quiz & Learning Module creation

Select/filter cases via the taxonomy
Global Health Administrators: Quiz Publishing

Publish Activity to Target Audience

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[Diagram of Activity Designer interface showing draft and published activities]
Future Directions

- Expansion
  - Looking for collaborators interested in Global Health and crowdsourcing localized disease knowledge

- Privacy
  - All content follows ACR’s HIPAA compliance regulations

- Open Access, Efficiency, Critical Mass
  - Configured for open access, sharing and collaboration

- Content collection methods promote data compatibility to grow radiology’s knowledge and assessment programs
  - Personal content kept in a ‘ready to use’ state
References


