

DOTTORATO DI RICERCA IN MEDICINA TRASLAZIONALE CICLO

Attività formativa per il Dottorato di Ricerca in Medicina Traslazionale

PROPOSTA DIDATTICA PER IL DOTTORATO	
Acromegaly: data from Swedish National Registries	
Docente /docenti	Daniela Esposito, MD, PhD
SSD	
TITOLO DEL CORSO	Acromegaly: data from Swedish National Registries
MODALITA' DELLA VERIFICA	PhD students will be engaged in a case-based discussion and a peer review activity. These activities aim to assess their understanding of acromegaly, diagnostic approaches, treatment options, and their ability to critically analyse quality of published studies.
Sintetica descrizione della proposta didattica	<p>LESSON'S OVERALL AIM</p> <p>To provide PhD students with a comprehensive understanding of acromegaly, including its diagnosis, management and associated morbidity and mortality. The lesson will also focus on fostering an awareness of various methodological approaches employed in clinical research and honing the ability to critically analyse the strengths and limitations of different study designs.</p> <p>Over the course of three meetings, participants will explore the diagnosis, characteristics of patients, treatment strategies, complications of acromegaly (with a special focus on diabetes and cardiovascular diseases). They will also learn how to critically analyse the quality of published articles, with a focus on systematic reviews and meta-analyses.</p> <p>LEARNING OUTCOMES</p> <p>By the end of this lesson, PhD students should be able to:</p> <ul style="list-style-type: none"> - Describe the diagnostic criteria and approaches for acromegaly - Discuss the potential complications, morbidity, and mortality associated with acromegaly - Understand different methodological approaches used in clinical research - Discuss strengths and limitations of various study designs - Critically analyse quality of clinical studies as well as systematic reviews and meta-analysis <p>LESSON'S PLAN</p>

Three meetings have been planned:

Meeting 1 (1,5 hour): “Acromegaly: Data from Population-based studies – The strengths of Swedish National Registries”

This session aims to provide a comprehensive understanding of the diagnostic process and the diverse features that define individuals affected by acromegaly. Acromegaly is a rare disease caused by abnormal secretion of growth hormone (GH) most commonly due to a benign tumour in the pituitary gland. This leads to increased production of insulin-like growth factor-1 (IGF-1). Clinical manifestations include enlarged extremities, facial changes, and soft tissue growth. Acromegaly is associated to excess morbidity and mortality.

During this meeting, an overview on diagnosis, management and outcomes in patients with acromegaly will be presented. Our discussion will cover the underlying pathophysiology and the pivotal role of biochemical markers, such as GH and IGF-1 levels, in diagnosing acromegaly. Additionally, we'll explore the utilization of imaging techniques, such as MRI scans, to visualize pituitary tumours and recent data on management. In conclusion, data from the Swedish Acromegaly Registries on outcomes in acromegaly will be presented.

Meeting 2 (1,5 hour): Long-term outcomes in patients with acromegaly

Building upon the foundational knowledge from the first meeting, the second session will focus on complications associated with acromegaly, with a focus on diabetes mellitus and cardiovascular diseases.

Diabetes mellitus

Diabetes mellitus is a common complication of acromegaly and may contribute to the excess cardiovascular risk observed in these patients. The risk of diabetes in acromegaly is mainly driven by increased GH exposure that directly attenuates insulin signalling and stimulates lipolysis, resulting in increased free fatty acids, with increased hepatic gluconeogenesis and reduced glucose uptake in peripheral tissues. Diabetes occurs in 30-50% of patients with acromegaly and, interestingly, it persists in a large number of cases despite biochemical control with normalization of GH secretion.

Cardiovascular Diseases and Acromegaly

Excessive GH have an important impact on cardiovascular system, resulting in cardiovascular complications as hypertension, cardiomyopathy, arrhythmias and valvulopathies. Participants will gain insights into the cardiovascular implications of acromegaly, enabling the formulation of targeted interventions to mitigate these risks.

Meeting 3 (1,5 hour): Systematic reviews & Meta-analysis

	<p>In the third session, participants will delve into the methodology of systematic reviews within the context of acromegaly research. Systematic reviews offer a comprehensive synthesis of existing research, and participants will learn how to critically assess the quality of such reviews.</p> <p>During these session, participants will be divided into smaller groups, each assigned a different systematic review. Participants will analyse their assigned review, considering its research question, methodology, inclusion criteria, data extraction, and overall findings. This hands-on exercise enables participants to navigate systematic reviews effectively and evaluate their quality and significance.</p> <p>Following the group analysis, all participants will engage in a collective discussion. Each group will present a summary of their review, highlighting strengths, limitations, and potential biases. Participants will engage in a critical discussion, exploring the methodological rigor and credibility of sources. This discussion encourages participants to embrace diverse perspectives and insights.</p> <p>The meeting concludes with a brief summary of the key takeaways from the systematic review analysis and discussions. Participants will be encouraged to apply the skills gained in critically assessing published research articles to their own work and research endeavours. This interactive session not only enhances participants' ability to evaluate the quality of systematic reviews but also promotes a deeper understanding of how research informs evidence-based practice.</p>
<p>Eventuali note aggiuntive sulla didattica</p>	<p>This lesson plan includes a mix of teaching approaches, such as lectures, interactive discussions, and peer reviews, that offers several benefits for student learning and engagement (<i>Bates, Teaching in a digital age – second edition, 2019; Ezezi Isaac Obilor, Feedback and Students' Learning, April 2019, International Journal of Innovative Research in Education 7(2):40-47</i>)</p>