

PAGET-SCHROETTER
SYNDROME IN A
COLLEGIATE SWIMMER

KATELYN ROSE, LAT, ATC

ROLLINS COLLEGE ATHLETIC TRAINER

PROUD UCF ALUMKNIGHT

PATIENT DEMOGRAPHICS

- 19-YEAR-OLD FEMALE
- COMPETITIVE SWIMMER
- NO PAST MEDICAL ISSUES REPORTED

INCITING EVENT

- PATIENT REPORTED TO FIRST SWIM PRACTICE OF THE SEASON
- AFTER PRACTICE, NOTICED A FEELING OF HEAVINESS IN R ARM
 - WOKE UP THE NEXT MORNING WITH SWELLING AND A STRANGE SENSATION IN HER ARM WITH A FEELING OF HEAVINESS WITH ANY OVERHEAD ACTIVITY

RESULTS OF AT'S EXAM

skin was patent and splotchy

no circulatory or neurological symptoms

no tingling or coldness of limb

tactile sensation was decreased

Strength WNL



COMMON PRESENTATION OF PAGET- SCHROETTER SYNDROME (PSS)¹

FOR OUR PATIENT, THE PRESENTATION WAS
NOT QUITE AS OBVIOUS

TESTING

- ADSON'S TEST
 - NECK EXTENSION + SHOULDER ABD + NECK ROTATED TO TESTED SIDE + CHECK RADIAL PULSE
- ALLEN'S TEST
 - TURN HEAD AWAY FROM AFFECTED SIDE + CHECK RADIAL PULSE

IMMEDIATE REFERRAL



Primary Care Doctor

Sent immediately to vascular surgeon for expert opinion



Vascular Specialist

Suggested surgical intervention

DIFFERENTIAL DIAGNOSIS

- THORACIC OUTLET SYNDROME
- COMPARTMENT SYNDROME
- SYSTEMIC INFECTION
- BRACHIAL NEURITIS
- EFFORT-INDUCED THROMBOSIS AKA PAGET-SCHROETTER SYNDROME

OVERVIEW OF PSS

Blood clot formation inside the subclavian artery or vein at the costoclavicular junction

Mechanism: strenuous, overhead activity (pitching, swimming, wrestling, etc.)

The brachial artery is compressed between the anterior scalene, costoclavicular ligament, medial clavicle, and first rib²

Repeated overhead activity → chronic compression causing microtrauma in the artery and a place for platelets to adhere or scar tissue to form

NARROWING OF SUBCLAVIAN ARTERY WITH HYPERABDUCTION³



TREATMENT

- A CATHETER AND AN ANTICOAGULANT WERE INSERTED ABOVE THE CLAVICLE TO HELP BREAK UP THE BLOOD CLOT IN THE SUBCLAVIAN ARTERY
 - THIS BLOOD CLOT WOULD CONTINUE TO REFORM WITH OVERHEAD ACTIVITIES IF THE UNDERLYING ISSUE WAS STILL PRESENT⁴

SURGICAL INTERVENTION

- PATIENT UNDERWENT A FIRST RIB AND ANTERIOR SCALENE MUSCLE RESECTIONING TO RELIEVE PRESSURE ON THE SUBCLAVIAN ARTERY
- THE LONGER IT TAKES FOR INTERVENTION AND THE LARGER THE BLOOD CLOT GETS, THE POORER THE PROGNOSIS⁴

PSS

- 3000 TO 6000 CASES YEARLY IN THE UNITED STATES⁴
- YOUNG, MALES ARE TWICE AS LIKELY TO BE AFFECTED COMPARED TO FEMALES
- SUDDEN DEATH WAS THE FIRST SIGN IN 25 PERCENT OF CASES OF PSS DUE TO THE BLOOD CLOT TRAVELING ELSEWHERE IN THE BODY⁵
- MANUAL LABORERS WHO PERFORM OVERHEAD EXERTIONAL ACTIVITIES REPEATEDLY ARE THE MOST AT RISK FOR THE SYNDROME

THANK YOU

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Schellhase, Ed.D, LAT, ATC

Paul Giannotti, LAT, ATC

Andrew Reber, MA, LAT, ATC

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