

Academic Physician Quarterly

A DEPARTMENT OF MEDICINE BULLETIN



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FLORIDA
College of Medicine
Jacksonville

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CHAIRMAN'S MESSAGE

Dear colleagues:

I am pleased to share with you the spring 2008 issue of Academic Physician Quarterly (APQ) newsletter.

Traditionally this season is viewed as a time for rejuvenation, rebirth and happiness in sharp contrast to the challenges of winter. This is exemplified in a quote by the American poet Anne Bradstreet "If we had no winter, the spring would not be so pleasant: if we did not sometimes taste adversity, prosperity would not be so welcome" (Meditations Divine and Moral, 1655). Of course, having enjoyed a mild and beautiful Florida winter season, it is hard for us to appreciate the simile in the quote. Perhaps this will lead us to infer that the upcoming spring season would be even more pleasant.



As promised in the last issue of the APQ, we describe our Transitional Care Unit in the Focus section. The dedicated team of health care providers in this unit brings hope for rehabilitation and recuperation to a group of patients who have suffered substantial loss of functionality and independence; a chance for "spring season" after a long and brutal "winter" of health setbacks.

In an effort to keep our community physicians abreast of the new services developed at the University of Florida - Jacksonville & Shands, two new members of the Department are highlighted in the section on Meet Your Colleagues. Dr. Khan and Dr. Bajwa bring a unique set of skills that are invaluable in patient care delivery to the Division of Pulmonary, Critical Care and Sleep Medicine.

As always, if you have any comments, interesting cases or observations to share with colleagues, please e-mail them to me and I will be happy to include them in our future issues. My e-mail address is arshag.mooradian@jax.ufl.edu.

Arshag D. Mooradian, M.D.
Professor of Medicine
Chairman, Department of Medicine



**Senthil Meenrajan, M.D.,
M.B.A.**

**Assistant Professor of Medicine
(Geriatrics)**

**Division of General
Internal Medicine**

Transitional Care Unit

Over the last few years the Transitional Care Unit (TCU) has come to fill an important position in the care of patients at Shands and the University of Florida, Jacksonville. While the hospital is the best place to identify and initiate treatment of acute and severe medical conditions, many patients recover to the point that they no longer need the intensive monitoring and intervention of the hospital. However, these patients might still be convalescing and need ongoing care before they can be safely discharged. The TCU has created a niche in this area and has consistently delivered quality care.

- **Target Population:** patients requiring rehabilitation or other skilled nursing needs
 - Physical therapy
 - Occupational therapy
 - Speech and Swallow therapy
 - Prolonged intravenous antibiotics
 - Extensive wound care
 - Respiratory support
 - Management and education of complex ostomy and tubes

We serve the above needs of patients that come from different specialties including, general surgery, orthopedic surgery, neurosurgery, cardiothoracic surgery, trauma surgery and medical specialties including neurology, cardiology, pulmonary, nephrology and oncology.

- **The Unit:** The unit consists of 40 beds in 3 subunits that are designed to provide each patient with a pri-

vate room during their stay here. The unit also has a rehabilitation area that has equipment, a conference room in each subunit meant for the staff and the families, and an activities area that patients can use to socialize and participate in different activities. We are equipped to handle many complex needs of our patients and have ready access to the same services available in the hospital. Overall, the TCU is designed to be as patient friendly and relaxed as possible while providing optimal care.

- **The Team:** The team that makes visions turn into reality at the TCU includes an Administrator, Medical Director, Nursing Director, Admissions Coordinator, MDS Coordinator, Activities Director, dietitian, pharmacist, therapists (physical, occupational, speech), social workers, respiratory and wound care specialists and the compassionate and efficient nurses and their aides.



A group photo of the TCU team

Over the years we feel privileged and honored to have been instrumental in making significant changes in the lives of people we have cared for. Our biggest success and satisfaction comes from the compliments that our patients give us while they are here and after they have left. Added to this is the recognition from national and state accreditation agencies that have evaluated and continue to certify us with good distinction. Going forward we look to continue delivering the excellent care for each patient, each and every time.

Gina Chacon, M.D.
David Wolfson, M.D.
Carlos Palacio, M.D., M.P.H.
Animesh A Sinha, M.D., Ph.D.

Darier's disease: a commonly misdiagnosed cutaneous disorder.

CASE REPORT

A 48 year old Caucasian woman presented to the emergency department complaining of a two week history of severe burning pain and pruritus in her chest, back, scalp, and lower extremities. She was taking diphenhydramine and using steroid creams applied to the affected areas without any improvement.

Physical examination revealed extensive hyperkeratotic plaques on the chest, back, scalp, forehead, arms, and legs (Fig. 1A). Flat-topped brown papules were present on the dorsum of the hands. Other cutaneous signs included keratotic papules with a central pit on the palms and distal V-shaped notching with red longitudinal streaking in the nails (Fig.1B). She also had white, flat-topped papules in the oral mucosa (Fig. 1C). She noted periodic exacerbations during summer months. Family history revealed that her grandfather, father, and two sisters had similar skin lesions.

Histological examination of a biopsy of skin taken from a greasy papule from the patient's back showed a vesiculobullous pattern described as acantholytic dyskeratosis. A diagnosis of Darier's disease was established.

Figure 1: (A) Keratotic papules coalescing into crusted plaques; (B) Characteristic nail changes. V-shaped notches in the thumb nails, associated with longitudinal red bands; (C) White papules in the oral mucosa



DISCUSSION

Darier-White disease, also known as Darier's disease, or keratosis follicularis, was described independently by Darier and White in 1889. It is a rare autosomal dominant disorder of abnormal keratinization and acantholysis with involvement of the tonofilament-desmosome complex.

Most affected individuals will either give a family history of affected members or, in the absence of a positive history, will be found to have relatives who are affected with mild disease when they are carefully examined (1-4). Although exact figures of prevalence are unknown, there are estimates of 1 in 30,000 to 1 in 100,000 persons. There is an equal incidence of the disease in men and women. Almost all patients have worse symptoms during the summer due to heat and humidity.

A mutation in the ATP2A2 gene on chromosome 12q23-24.1, which encodes the sarco/endoplasmic reticulum calcium adenosine triphosphatase (ATPase) type 2 isoform pump (SERCA 2), is the causative mutation for Darier's disease. Calcium is known to have a role in regulating cell differentiation and in initiating assembly of desmosomes. Thus, acantholysis may result from loss of adhesion as a result of desmosome breakdown.

CLINICAL DIAGNOSIS

Patients with Darier's disease typically present in childhood or adolescence with hyperkeratotic, primarily follicular papules with a predilection for seborrheic areas of the body such as the scalp, face, chest, back, and flexures. Palmar pitting and hyperkeratotic papules on the hand dorsa and oral mucosal lesions may be seen. The pathognomonic nail sign is the combination of red and white streaks associated with a V-shaped notch.

Oral involvement, usually palatal, may be observed ranging from a fine granular to a coarse 'pebbly' appearance, or with cobblestone appearance of the palate. Involvement of the external ear, rhinoreactivity, and ocular affliction has also been reported. Itch is the most common complaint with Darier's disease, occurring in 88% of patients in one series. Patients complain of odor, especially in flexural sites where secondary infections are frequent. Heat, sweating, sunlight, lithium, steroid therapy, and

Continued on Page 4

stress may exacerbate the lesions. Darier's disease may be associated with an excess of neuropsychiatric disorders such as bipolar affective disorder, mental retardation, schizophrenia and epilepsy.

The diagnosis of Darier's disease can be made with history of familiar involvement, clinical appearance and histopathology. The evolving lesions of Darier's disease may be confused with acne, seborrheic dermatitis and Grover's disease. Pemphigus and other suprabasilar blistering disorders should be excluded.

MANAGEMENT

The primary aim of treatment in Darier's disease is controlling irritation (the most frequent symptom) with emollients, soap substitutes, and keeping the skin cool by wearing comfortable cotton clothing. Sunblock is recommended for those with a history of photoaggravation. Topical retinoids such as tazarotene or adapalene applied on alternating days in combination with topical corticosteroid antibiotic may be sufficient for patients with mild generalized or linear disease. Steroid application may re-

duce erythema and pruritus. Oral retinoids such as isotretinoin or acitretin have been shown to be effective in more extensive disease, but have adverse effects.

CONCLUSIONS

This case of Darier's disease shows the importance of recognizing patterns of dermatologic findings to arrive at the correct diagnosis. We also point out the need for re-evaluation of chronic cutaneous disorders that are not ameliorated by conservative therapy, particularly blistering disorders.

SELECTED REFERENCES:

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GME CORNER



N. Stanley Nahman, Jr., M.D.

Professor of Medicine

Associate Chairman

**Program Director, Internal
Medicine Residency**

The Medicine residency program is lead by faculty program directors, but the real "in the trenches" workers are our 4th year chief medical residents (CMR).

The CMR are chosen 18 months in advance and represent our strongest resident leaders. The position is an honor and for many, leads to fellowship training in subsequent years. Today we introduce our CMR for July 2008, Dr.'s Rosie Alcalde and Shilpa Reddy.



Dr. Rosie Alcalde

Dr. Alcalde hails from South Florida and obtained her medical degree from Ross. She is a quiet, determined leader and was honored as an intern with the best attendance for all noon conferences. She is recognized for her mentoring and teaching skills, both crucial qualities for an effective chief. Rosie plans to pursue fellowship training in Rheumatology.



Dr. Shilpa Reddy

Dr. Reddy is from Northwest Florida, Panama City to be exact, where her father is a gastroenterologist. Shilpa graduated from The University of Michigan and obtained her medical de-

gree from Nova. She is a highly organized and assertive leader who has excelled during her training. Her interest in clinical research led to a funded Dean's grant, followed by a presentation at a national meeting, and culminating with the submission of a manuscript. Shilpa is currently seeking a fellowship in gastroenterology for July following her year as CMR.

Both Dr.'s Alcade and Reddy will bring strong professional qualities to the position of CMR - but wait - they do not yet know all they need to know. To help foster their

professional development, the program will send both CMR to the national meeting of the Association of Program Directors in Internal Medicine where they will attend a two day leadership seminar with the other 625 CMR from around the country. Through this seminar, our CMR share experiences with other national leaders in residency training and will bring home ideas and systems that will help raise our program to the next level of excellence.

RX UPDATES

Ashley Schields, Pharm.D., BCPS

Amy Rockwell, Pharm.D.

Drug Therapy for Pulmonary Arterial Hypertension

Mainstays of pulmonary arterial hypertension (PAH) therapy include supplemental oxygen, diuretics, anticoagulation and calcium channel blockers. Prior to the introduction of intravenous epoprostenol (prostacyclin or prostaglandin I) the median survival of patients after diagnosis was 2.8 years. In subsequent years, there has been an increase in options available for medical management of PAH including the prostanoids, endothelin antagonists, and phosphodiesterase type 5 inhibitors. These products are not stocked by retail pharmacies and are available through special purchasing arrangements shipped directly to the patient. The Prostanoids are generally reserved for patients with more severe PAH symptoms (WHO Functional Class III-IV). These agents have a very short half-life and are therefore associated with inconvenient methods of administration.

- **Epoprostenol (Flolan®)** - has been shown to improve survival, functional class status, and quality of life in Class III-IV PAH; however, patients must wear a continuous ambulatory central intravenous infusion

pump. This increases the risk for catheter-related infections, thrombosis, and/or potentially fatal rebound PAH symptoms, should the pump malfunction. Adverse effects generally include jaw pain, headache, flushing, and gastrointestinal disturbances (N/V). The drug must be refrigerated to maintain stability. (1995 FDA Approval)

- **Treprostinil (Remodulin®)** - has the advantage of greater stability compared to epoprostenol and possible lower complication rate as it is delivered by continuous subcutaneous infusion. However, use is limited due to painful injection site reactions and induration and less survival data compared to epoprostenol. (2002 FDA Approval)
- **Iloprost (Ventavis®)** - shipped directly to the patient is administered via a handheld nebulizer, usually six to nine times daily. This drug has been shown to improve quality of life and WHO functional class in PAH patients; however, cost of the hand-held nebulizer device is approximately \$5,000. (2004 FDA Approval)

The Endothelin Receptor Antagonists are also useful in treatment of PAH and are available for oral administration. Endothelin-1 is considered a potent vasoconstrictor, which may contribute to an increase in vascular

tone and pulmonary hypertrophy that is observed in patients with PAH. These agents are more commonly recommended for less severe disease (WHO II to III). Two drugs are currently available in this class:

- **Bosentan (Tracleer®)** - is the most studied of the two and is taken twice daily.. It is associated with multiple drug interactions, severe hepatotoxicity, and teratogenicity (Pregnancy Category X); therefore, it requires patient registration in a limited access program in order to ensure monitoring. (2001 FDA Approval)
- **Ambrisentan (Letairis®)** - is available for once daily dosing. This agent is also considered Pregnancy Category X and carries a warning for hepatotoxicity requiring distribution only through a limited access program. This agent may have less reported drug interactions, but experience has generally been limited in vitro data. (2007 FDA Approval)

Finally, the phosphodiesterase-5 inhibitor sildenafil (Revatio®) was approved in 2005 for treatment of PAH. This drug is commonly used for treatment of erectile dysfunction under the trade name Viagra®. Dosing of sildenafil in PAH is 20 mg TID, which is significantly different from dosing for erectile dysfunction. Sildenafil is usually recommended for patients who have failed alternative



medical treatments; however, there has been increasing evidence for the use of this agent earlier in treatment (i.e., Functional Class I-II). This agent may be found in most pharmacies. At Shands Jacksonville, use of sildenafil (Revatio) is restricted to the Divisions of Pulmonology and Cardiology for treatment of PAH. An indication of PAH must be documented on all outpatient prescriptions before they may be filled in the Shands Jacksonville Ambulatory Pharmacy. (2005 FDA Approval)

References available upon request
Drug Information Service
Department of Pharmacy

NEWS & NOTES



- **Dr. Supriya Maddirala**, Assistant Professor of Medicine, Division of Nephrology and Hypertension, won the Young Faculty Research Award from the Southern Society for Clinical Investigation and the southern section of the American Federation for Clinical Research. Dr. Maddirala will present her work at the Plenary Session for the two organizations on Friday, February 22, 2008 in New Orleans. The title of her work is "Bacteremia in patients with HIV and hepatitis C: analysis of the DMMS study" and was chosen by the committee as the winning submission.

Congratulations to Supriya.



- **Dr. Michael Hernandez**, PGY3 in Internal Medicine, has been elected to Alpha Omega Alpha Medical Honor Society through his alma mater Florida State University College of Medicine (FSU-COM). Each year an AOA chapter can elect a house-staff member, an alumnus/alumna, and a faculty member in addition to senior students.

Congratulations to Michael for this exceptional honor.



- **Dr. Kent Wehmeier**, Associate Professor of Medicine and Chief of the Division of Endocrinology, Diabetes and Metabolism, in collaboration with Dr. Michael Haas, Associate Research Professor, published a seminal study in the prestigious journal *Biochim Biophys Acta*. The title of the manuscript is "Differential regulation of apolipoprotein A-I gene expression by vitamin D receptor modulators".

MEET YOUR COLLEAGUES

Two Pulmonologists Join the Department.



Abubakr Bajwa, MD, Assistant Professor of Medicine.

Dr. Bajwa completed his fellowship in Critical Care Medicine at the Mayo Clinic in Rochester, MN and his fellowship in Pulmonary Medicine at the Mayo Clinic in Jacksonville, FL. Dr. Bajwa's area of clinical expertise is interstitial lung disease, pulmonary hypertension and endobronchial ultrasound guided procedures. He and Dr. Khan have developed and started the "Pulmonary hypertension and Interstitial lung disease clinic" where focused care, therapy, referral for transplant and education is provided to this diverse and complex group of patients. Endobronchial ultrasound guided lymph node biopsy provides a safe, state of the art minimally invasive and accurate way to diagnose and stage lung cancer.



Akram Khan, MD, Assistant Professor of Medicine.

Dr. Khan did a preliminary surgery residency at Beth Israel Medical Center in New York, NY followed by a residency in Internal Medicine at the St. Louis University School of Medicine in St. Louis, MO. Dr. Khan completed his fellowship in Critical Care Medicine at St. Louis University, St. John's Mercy Medical Center in St. Louis, MO, his fellowship in Pulmonary Medicine at the Oklahoma University Medical Sciences Center in Oklahoma City, OK, and his fellowship in Sleep Medicine at the Mayo Clinic in Rochester, MN. He is board certified in Internal Medicine, Critical Care, Pulmonary Disease, and Sleep Medicine. Dr. Khan's areas of clinical expertise include sleep medicine, pulmonary and critical care. His academic interests include sleep disorders, pulmonary HTN, and medical & neurological disorders associated with sleep problems.

DIABETES & ENDOCRINOLOGY UPDATE SYMPOSIUM

*Presented by:
University of Florida College of Medicine - Jacksonville
Division of Endocrinology, Diabetes & Metabolism*

Date: Saturday, May 3, 2008

Time: 7:30 A.M. - 4:00 P.M.

Location: Hyatt Regency Jacksonville Riverfront

Available Credits: 7.0 CME

Register now for a one-day symposium featuring seven expert clinicians who will present updates on the following topics: insulin therapy, growth hormone replacement in adults, skeletal health and osteoporosis, drug therapy for Type 2 diabetes, male hypogonadism, thyroid disorder, and diabetic dyslipidemia.

Join your colleagues for this interactive and enjoyable educational program with endocrinologists from UF Jacksonville, Cleveland Clinic, and Case Western Reserve University.

Registration fees: Physicians \$50; Non-Physicians \$35; Residents/Fellows: No Charge with letter from department verifying status. A \$25 late fee is added to registrations after April 29. Register on UF's online secure website, <http://hscj.ufl.edu/cme/>.

For more information, please contact Barbara Jones at 904-244-2380 or barbara.jones@jax.ufl.edu

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