Self Teaching Module for the Influence of Culture and Pigment on Skin conditions in Children

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Self teaching module for the influence of culture and pigment on skin conditions in children
(Dinulos and Graham)

Category 1: Pigmentary Changes
Slide 1: Contact Dermatitis

Contact dermatitis to a metal fastener on a pair of jeans that has produced hyperpigmented papules coalescing to a plaque on this child's abdomen. The papules will resolve with corticoid steroid treatment and removal of contact with metal, but the hyperpigmentation will last for months.
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Category 1: Pigmentary Changes
Slide 2: Chicken Pox (Varicella)

This child has hyperpigmented macules scattered over her body from chicken pox. These lesions can be prevented by appropriate vaccination of children 12 months and over with the varicella vaccine.
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Category 1: Pigmentary Changes

Slide 3: Superficial Laceration

A superficial laceration has produced hypopigmentation with surrounding hyperpigmentation in this patient.
Category 1: Pigmentary Changes

Slide 4: Atopic Dermatitis

This teen has severe pigmentary changes from inadequately treated atopic dermatitis. Constant scratching and secondary infection produce hyperpigmentation. Early treatment of atopic dermatitis when it is mild is essential. Adequate topical corticosteroids, oral antihistamines and moisturizing agents to prevent itching, and early recognition and treatment of secondary bacterial skin infection can help prevent this cosmetically disfiguiring change in pigment.
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Category 2: Exaggerated Cutaneous Reaction
Patterns to Injury and Inflammation

Slide 5: Papular/Follicular Changes:
Nummular Eczema

A papular and follicular response, often in plaques or circular patches, are common presentations of common conditions in children with dark skin. This child has a patch of nummular eczema, with coalescing papules around the pilar apparatus (located just below the nipple on the chest).
Category 2: Exaggerated Cutaneous Reaction
Patterns to Injury and Inflammation

Slide 6: Papular/Follicular Changes: Pityriasis Rosea

This child with classic pityriasis rosea lesions demonstrates the papular-follicular presentation of this common condition in children with dark skin. This superficial inflammation usually resolves with temporary hypopigmentation at the site of lesions over 6 to 8 weeks.
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Category 2: Exaggerated Cutaneous Reaction
Patterns to Injury and Inflammation

Slide 7: Mesenchymal Reactions: Keloid

Keloids and hypertrophic scars result from exaggerated mesenchymal responses and are very common in individuals of Asian, African and Hispanic background. This photo illustrates a keloid at a site of ear piercing. There is anecdotal evidence that infants are not as likely to form keloids. It is a very common practice in many ethnic groups to do ear piercing in early infancy which may help to avoid keloid formation.
Category 2: Exaggerated Cutaneous Reaction
Patterns to Injury and Inflammation

Slide 8: Mesenchymal Reactions: Keloid

This child has a large keloid at the site where he had a burn.
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Category 2: Exaggerated Cutaneous Reaction
Patterns to Injury and Inflammation

Slide 9: Lichenification in Atopic Dermatitis

This child with severe atopic dermatitis illustrates the tendency of children with dark skin to develop very unsightly lichenification where they have a chronic dermatosis and pruritis. This lichenification and hyperpigmentation is very slow to resolve even with regular treatment with topical steroids.
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Category 2: Exaggerated Cutaneous Reaction
Patterns to Injury and Inflammation

Slide 10: Lichenification and Secondary Infection

Inadequate treatment of atopic dermatitis in this patient has resulted in secondary infection. Hyperpigmentation is present where there has been secondary infection. Lichenification developed where there has been scratching of the popliteal fossa.
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Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 11: Mongoloid Spots on Buttocks

Mongoloid spots are common in children from many different racial backgrounds. These patches of dermal melanocytosis are found in greater than 90% of African Americans, 81% of Asian, and 70% of Hispanic infants. Although they are often seen in the lumbosacral and gluteal areas they are not limited to those regions. They need to be distinguished from bruises of child abuse. Compared to a bruise they are more uniform in skin color, their borders are better defined, there is no induration or tenderness and they are stable over time.
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Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 12: Mongoloid Spots on Extremeties

The Mongoloid spots on this infant show a less common presentation on the lower extremities. These could be confused with a bruise on the ankle.
Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 13: Transient Neonatal Pustular Melanosis

The hyperpigmented macules and vesicles seen on the face and neck of this newborn infant are characteristic of transient neonatal pustular melanosis (TNPM). These occur in 2 - 5% of black infants and less than 1% of white infants. They are more common in term infants and are almost always seen at birth or soon after birth. The pustules and vesicles are very superficial and resolve over a period of a few days. The hyperpigmented macules may last for weeks to months.
Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 14: Transient Neonatal Pustular Melanosis

TNPM has caused the pustules seen on the forehead of this newborn. They can often be confused with herpes simplex, but usually can be distinguished on clinical grounds. Intrauterine acquired herpes infection can present with vesicles and pustules at birth, but most of these infants have intrauterine growth retardation and microcephaly. Perinatally acquired herpes infection usually does not present with vesicles until day of life 5 - 17.
Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 15: Tinea Corporis – Classic Presentation

Tinea corporis is extremely common in children of all ethnic backgrounds, but sometimes may have a different appearance in children with dark skin. This is a typical lesion of tinea corporis: an annular shaped lesion with raised margins, clearing in the center and some erythema.
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Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 16: Tinea corporis – without Erythema

Tinea corporis often presents without any erythema in children with dark skin as is illustrated in this photo.
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Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 17: Tinea corporis – at Hairline

Tinea corporis at the hairline, which goes into the scalp, needs to be treated systemically with oral anti-fungal agent such as griseofulvin.
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Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 18: Herald Patch of Pityriasis Rosea

This lesion looks very similar to tinea corporis but actually is a herald patch seen at the onset of pityriasis rosea.
Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 19: Pityriasis Rosea- Classic Presentation

The oval shaped plaques of confluent scaling papules, distributed along the dermatomes, are characteristic of pityriasis rosea in children. The lesions may be more difficult to see in children with darker skin pigmentation and as noted earlier, often have a more papulofollicular appearance. In this child, the large herald patch is very prominent.
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Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 20: Pityriasis Rosea – Inverse Distribution on Arms

Children with dark skin often present with an inverse distribution of lesions in pityriasis rosea. Rather than appearing on the trunk, as in the prior photo, they primarily are distributed on the arms and legs as is illustrated in this photo.
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Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 21: Pityriasis Rosea – Inverse Distribution on Legs

Pityriasis rosea lesions on the legs of patient in previous Photo 20. The large patches on the right leg appeared first and were initially thought to be tinea corporis.
Category 3: Common Conditions seen in Infancy and Early Childhood

**Slide 22: Lichen Nitidus**

Lichen nitidus is an asymptomatic chronic papular condition that is seen more frequently in children with dark skin and is particularly common in boys. Lesions are often found on the forearms, penis and trunk. It usually does not respond to topical steroids and resolves without treatment over a period of months, but the duration of lesions is variable.
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Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 23: Lichen Nitidus vs Lichen Striatus

This child has a line of skin colored papules stretching from the upper thigh to the ankle. Initially it was thought that the lesions were lichen striatus. The lesions of lichen striatus appear similar to those of lichen nitidus, but have a linear distribution. The histopathology is different. This child developed many other skin colored papules over the trunk during the next few months. When they were biopsied the histopathology of the lesions was found to be characteristic of lichen nitidus.
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Slide 24: Lichen Nitidus close-up
A close-up of skin colored papules in the child with lichen nitidus shown in Photo 23.
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Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 25: Pityriasis Alba

The hypopigmented patches on this child's left cheek is characteristic of pityriasis alba. This condition is thought to be a variant of atopic dermatitis. The lesions are slightly scaly and have poorly defined borders. They often improve with a low strength topical steroid application. The patches tend to be more prominent in the summer and fall as the child's normal skin tans and gets darker with the sunlight exposure whereas the affected areas remain paler.
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Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 26: Kerion in Tinea Capitus

This is a typical kerion in tinea capitis. For unknown reasons, tinea capitis is much more prevalent in the United States in African American children than in children of other races. Fifteen percent of African Americans who visited an outpatient clinic for non-dermatological reasons were found to be infected in a recent study. Diagnosis is usually not difficult when an inflamed kerion is present. Although pustules are present and a culture may show bacteria, it is not necessary to treat with antibiotics. Griseofulvin (15-25mg/kg/day) is still the drug of choice for this fungal infection and treatment is needed for 4 to 8 weeks. Occasionally a kerion will be very boggy and tender and a short course of oral cortical steroids, 1-2 mg/kilo for 5 days, helps to improve the pain and swelling.
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Category 3: Common Conditions seen in Infancy and Early Childhood

Slide 27: Tinea Capitus

In children with thick curly hair it may be hard to find localized areas of alopecia that are characteristic of tinea capitis. The current epidemic of this illness often presents with a seborrheic-like scaling in the absence of alopecia. This non-inflamed presentation leads to delayed diagnosis and spread within the household. Trichophyton tonsurans is the most common dermatophyte. It does not fluoresce under a Woods lamp.
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Category 4: Conditions Common in Adolescents and Young Adulthood

Slide 28: Tinea Versicolor - Hyperpigmented

These lesions are examples of the hyperpigmented variation of tinea versicolor. The plaques and patches are slightly raised, usually circular, often on the neck and upper face, but commonly on the chest, back, and under the breasts in adolescent girls. This fungal infection is caused by Pityrosporum ovalae and is most common in adolescents. It responds well to treatment with 2 1/2 percent selenium sulfide or topical anti-fungal creams.
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Category 4: Conditions Common in Adolescents and Young Adulthood

Slide 29: Tinea Versicolor - Hypopigmented

The name tinea versicolor refers to the variable coloration of lesions. In this case the patient has hypopigmented lesions.
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Category 4: Conditions Common in Adolescents and Young Adulthood

Slide 30: Pseudofalliculitis Barbae

Pseudofolliculitis barbae is a foreign body reaction that occurs when arcuate hairs curve upon themselves and re-penetrate the skin. This creates pustules and papules as illustrated on the back of the head of this young man who has shaved his scalp. It particularly happens if the scalp or face are shaved with a straight razor blade. Treatment consists of avoiding a close shave, shaving with an electric razor and applying a depilatory chemical cream. There are a variety of such creams and powders available on the market.
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Category 4: Conditions Common in Adolescents and Young Adulthood

Slide 31: Acne

This Asian girl has typical acne lesions. The inflamed papules will resolve leaving a violet colored or brown hyperpigmented macule. Early treatment of acne, when it is mild, is important to prevent the long lasting hyperpigmentation and scars.
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Category 4: Conditions Common in Adolescents and Young Adulthood

Slide 32: Hyperpigmentation from Tretinom (Retin A) Use

This teen's acne improved with Retin A, but hypopigmentation developed on the cheeks where it was applied more densely. The hypopigmentation resolved with shortening the duration of Retin A application to 2 hours and adding an oral antibiotic to prevent the inflammatory lesions. Topical treatments for acne can produce pigmentary changes. Benzoyl peroxide which is commonly used in over the counter acne preparations, is a bleaching agent and produces lightened skin color with overuse. It can also bleach eyebrows and hair. Tretinoin (Retin A) is usually well tolerated in teens with more darkly pigmented skin. However, it may produce intense inflammation which can result in hyperpigmented patches on the face that are very slow to resolve or hypopigmentation as in the case above. Stronger forms of tretinoin (0.1% cream) have been used to successfully lighten post inflammatory hyperpigmentation from acne in adults with 40 weeks of nightly treatment.
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Category 5: Skin Manifestations of Cultural Practice

Slide 33: Traction Alopecia

Traction alopecia often produces linear areas of hair loss. This is commonly seen with tight hair braids or tuffs and is found in individuals from many different ethnic backgrounds. The alopecia can be permanent if there are large areas that are not recognized and treated appropriately by loosening the traction on the hairs.
Category 5: Skin Manifestations of Cultural Practice

Slide 34: Henna

Henna is commonly used in many cultural groups to decorate the body for special occasions. This East African patient applied henna to her feet to celebrate Ramadan. Henna comes in a range of colors from black to reddish brown and orange. When applied to the fingertips, black henna has been found to interfere with measurement of oxygen saturation from a fingertip. A similar interference is not found with the red or orange types of henna. In newborn infants there is enough transcutaneous absorption of the active agent in henna, *lawsone* (a potent oxidizing agent), to produce hemolysis of red blood cells and indirect hyperbilirubinemia. Henna often is combined with para-phenylenediamine (PPD) to enhance the color. PPD can be very toxic if ingested or absorbed from large body area applications. It causes angioneurotic edema, renal failure and circulatory collapse.
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Category 5: Skin Manifestations of Cultural Practice

Slide 34 (a): Henna and Contact Dermatitis

This East African girl developed a severe contact dermatitis with itching at the site of an elaborate skin decoration with henna. It resolved well with oral antihistamines and topical steroid cream application. Similar contact dermatitis has been reported to a variety of forms of henna coloring. However, some patients with contact dermatitis who have subsequently had patch tests with lawsone, the active ingredient in henna, have not shown a reaction. This suggests that there are other unidentified ingredients in henna powders which are allergens.
Category 5: Skin Manifestations of Cultural Practice

Slide 35: Coining in a Child

This East African girl developed a severe contact dermatitis with itching at the site of an elaborate skin decoration with henna. It resolved well with oral antihistamines and topical steroid cream application. Similar contact dermatitis has been reported to a variety of forms of henna coloring. However, some patients with contact dermatitis who have subsequently had patch tests with lawsone, the active ingredient in henna, have not shown a reaction. This suggests that there are other unetermined ingredients in henna powders which are allergens.
Category 5: Skin Manifestations of Cultural Practice

Slide 36: Coining Technique

The lesions seen in coining are produced by rubbing a warm oil or Tiger Balm on the skin and firmly abrading the skin with a coin or special instrument as is illustrated in this photo. The lesions of coining should not be confused with child abuse. Patients report variable degrees of comfort with coining. Some describe it as soothing like a massage and others as painful.
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Category 5: Skin Manifestations of Cultural Practice

Slide 37: Circular Burns from Traditional Healing

Patterned circular scars around the umbilicus in this East African child were produced by traditional treatments for illness. Burns are produced by a hot stick or by dropping burning incense or herbs onto the skin. They are often seen around the umbilicus, chest, wrists and ankles. We have reports that this practice is done by traditional healers in the U.S. and locally it has been done for treatment of chronic eczema in children. The presence of the lesions usually indicate that the child was very sick at one time and western medical treatment was not available or had not been effective. It is useful for the provider to ask about how the child was ill at the time they received the treatment.
Category 5: Skin Manifestations of Cultural Practice

Slide 38: Circular Burns on Scalp

These circular lesions were produced by traditional burning treatments in an East African boy. Initially they were confused with alopecia from tinea capitis but the history indicated that they had been produced by a traditional treatment for chronic ear infection.
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Category 5: Skin Manifestations of Cultural Practice

Slide 39: Scarring

These diagonal scars at the top of the buttocks were from cuts made in the skin by the grandmother of this East African child "to help her walk" when she was about 9 months of age. Scars are also common on the face as cosmetic and religious decoration in many African groups.
Category 5: Skin Manifestations of Cultural Practice

Slide 40: Cupping

The circular bruises in this Vietnamese child are from cupping, a form of treatment common in Asian cultures. These lesions were produced by a bell like suction apparatus and were used to treat febrile respiratory condition thought due to &wind illness&. Like coining, cupping is done to release wind from the body and thereby restore balance and health. The child complained that this cupping, done by a grandmother hurt, but that it did not hurt when done by mother.