The correct answer is B) Pulmonary function testing with flow volume loops.

This question can be found in MKSAP 16 in the Rheumatology section, item 45.

Pulmonary function testing with flow volume loops is indicated for this patient with suspected relapsing polychondritis and pulmonary findings. This autoimmune inflammatory disorder affects the cartilage of the ears and nose, along with a polyarthritides. Relapsing polychondritis also can affect the cartilaginous tracheal rings of the larynx, trachea, and bronchi, which can lead to obstructive findings on flow volume loop diagrams. There are no serologic tests for relapsing polychondritis; diagnosis can be made by biopsy of the affected cartilage but is not necessary if sufficient clinical criteria are present, as seen in this patient with chondritis of the ears and nose, along with a polyarthritides.

Bronson Methodist Hospital is a tertiary, 434-bed, non-profit hospital that is part of a locally governed healthcare system with nearly 6,600 employees covering a service area population of 1.2 million. This award-winning facility includes all-private rooms, an adult critical care unit with 35 beds, designated as a Level I Trauma Center and includes a children's hospital by NACHRI. It's also a certified primary stroke center (2005-2013), a cardiac specialty center (2004-2010) and an accredited Cycle III Chest Pain Center (2010-2014). For additional awards and certifications, visit bronsonhealth.com.

Bronson Battle Creek Hospital is a 218-bed, all-private room community hospital providing a full range of outpatient and inpatient acute care including robotic surgery, world-class diagnostics, and rehabilitation services. It is recognized as one of the country's safest hospitals and has been a leader in the development of electronic medical records as evidenced by multiple honors as both one of America's "most wired" and "most wireless" hospitals. The Commission on Cancer of the American College of Surgeons recognizes it as a Community Hospital Comprehensive Cancer program, the only hospital in Michigan to receive that honor three times. Specialty services include one of Calhoun County's largest accredited sleep centers and a wound-healing center with hyperbaric oxygen therapy.

Bronson LakeView Hospital in Paw Paw is a 35-bed, all-private room critical access hospital serving Van Buren and Kalamazoo counties. It offers a wide range of acute care services including surgery, geriatric psychology and emergency care. Outpatient services are provided at the hospital as well as at Bronson Lakeview Outpatient Center in Paw Paw and rural health clinics in Decatur, Lawton, Marcellus and Mattawan. Services include behavioral health, home health, rehabilitation, pharmacy, diagnostics and a host of specialty clinics.

Saddle nose deformity also can occur in patients with granulomatosis with polyangitis (also known as Wegener granulomatosis) and is caused by destructive sinusitis with erosion into the cartilage, which can be detected by performing a CT of the sinuses. This patient's previous ear inflammation, negative ANCA, and absence of sinus disease argue against granulomatosis with polyangitis as the cause of saddle nose deformity, and CT is not warranted.

Rheumatoid factor is present in many patients with rheumatoid arthritis, a disorder that is not associated with destructive facial lesions. Patients with nasal deformity suspected to be caused by cocaine-induced midline destructive disease or vasculitis would require a urine toxicology screen. These patients often have a positive ("atypical") pANCA due to antibodies to elastase (rather than myeloperoxidase). Based on this patient's findings, including ear damage, arthritis, and negative ANCA, a urine toxicology screen is not warranted.

Key Point
- Pulmonary function testing with flow volume loops is indicated for patients diagnosed with or suspected of having relapsing polychondritis to evaluate for upper airway involvement.

Test Yourself

(questions on page 4)

Test and critique

The correct answer is B) Pulmonary function testing with flow volume loops. This question can be found in MKSAP 16 in the Rheumatology section, item 45.

Pulmonary function testing with flow volume loops is indicated for patients with suspected relapsing polychondritis and pulmonary findings. This autoimmune inflammatory disorder affects the cartilage of the ears and nose, and up to 50% of patients also have a rheumatoid arthritis-like polyarthritides. Relapsing polychondritis also can affect the cartilaginous tracheal rings of the larynx, trachea, and bronchi, which can lead to obstructive findings on flow volume loop diagrams. There are no serologic tests for relapsing polychondritis; diagnosis can be made by biopsy of the affected cartilage but is not necessary if sufficient clinical criteria are present, as seen in this patient with chondritis of the ears and nose, along with a polyarthritides.

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Key Point
- Pulmonary function testing with flow volume loops is indicated for patients diagnosed with or suspected of having relapsing polychondritis to evaluate for upper airway involvement.

Crossed Words

(question on page 4)

Answer: Noonan syndrome

Noonan syndrome is a disease that can be passed down through families (inherited). It causes abnormal development in many parts of the body. Noonan syndrome used to be called Turner-like syndrome.

Noonan syndrome is an autosomal dominant condition linked to defects in several genes. Symptoms include delayed puberty, down-slanting or wide-set eyes, hearing loss (varies), low-set or abnormally shaped ears, mild intellectual disability in about 25% of cases, ptxis, short stature, small penis, undescended testicles, unusual chest shape (usually pectus excavatum), and a webbed and short-appearing neck.

(Source: National Library of Medicine, online at www.ncbi.nlm.nih.gov/pubmedhealth/PMH0002621/)

Crossed Words

(SNOUTS SODIUM GOWERS ONYONG VALVES INNARD)

Test Yourself

(questions on page 4)

Answer and critique

The correct answer is B) Pulmonary function testing with flow volume loops. This question can be found in MKSAP 16 in the Rheumatology section, item 45.

Pulmonary function testing with flow volume loops is indicated for patients with suspected relapsing polychondritis and pulmonary findings. This autoimmune inflammatory disorder affects the cartilage of the ears and nose, and up to 50% of patients also have a rheumatoid arthritis-like polyarthritides. Relapsing polychondritis also can affect the cartilaginous tracheal rings of the larynx, trachea, and bronchi, which can lead to obstructive findings on flow volume loop diagrams. There are no serologic tests for relapsing polychondritis; diagnosis can be made by biopsy of the affected cartilage but is not necessary if sufficient clinical criteria are present, as seen in this patient with chondritis of the ears and nose, along with a polyarthritides. Because respiratory tract involvement is prevalent, pulmonary function testing with flow volume loops is indicated for patients diagnosed with or suspected of having relapsing polychondritis. This testing can detect the presence of large upper airway involvement, which might require more aggressive treatment.

Saddle nose deformity also can occur in patients with granulomatosis with polyangitis (also known as Wegener granulomatosis) and is caused by destructive sinusitis with erosion into the cartilage, which can be detected by performing a CT of the sinuses. This patient's previous ear inflammation, negative ANCA, and absence of sinus disease argue against granulomatosis with polyangitis as the cause of saddle nose deformity, and CT is not warranted.

Rheumatoid factor is present in many patients with rheumatoid arthritis, a disorder that is not associated with destructive facial lesions. Patients with nasal deformity suspected to be caused by cocaine-induced midline destructive disease or vasculitis would require a urine toxicology screen. These patients often have a positive ("atypical") pANCA due to antibodies to elastase (rather than myeloperoxidase). Based on this patient's findings, including ear damage, arthritis, and negative ANCA, a urine toxicology screen is not warranted.

Key Point
- Pulmonary function testing with flow volume loops is indicated for patients diagnosed with or suspected of having relapsing polychondritis to evaluate for upper airway involvement.