Managing the special needs Patient
It’s not a hard as you might think

Who’s “Special”?  
• Patients with Physical challenges  
• Patients with Developmental challenges  
• Patients with Medical challenges

They are all tied together
• There is considerable overlap between the various challenges, for instance your patient with Autism, may have Cerebral Palsy, your Patient with Cognitive challenges may be deaf, and so on.

It’s mostly common sense

Physical challenges
• Cerebral Palsy
Cerebral Palsy

• The term cerebral palsy refers to a group of neurological disorders that appear in infancy or early childhood and permanently affect body movement, muscle coordination, and balance.

Cerebral Palsy

• Cerebral palsy is the leading cause of childhood disability affecting function and development. The incidence of the condition has not changed in more than 4 decades, despite significant advances in the medical care of neonates.

Types of C.P.

• Spastic 60-75%
  – Hemiplegia 20-30% (one side more than other)
  – Diplegia 30-40% (Lower more than upper)
  – Quadriplegia 10-15% (all 4 extremities and trunk)
• Dyskinetic (Abnormal movements) 10-15%
  – Athetoid (sluggish writhing movements mainly fingers and face)
  – Chorea (Sudden involuntary movements)
  – Dystonic (slow rotational movements)
• Others

Severity of disorder:

• Wide range of disability
  – May be barely noticeable
  – May be severely impaired
  – May be anywhere in between

Other disorders commonly seen with C.P.

• Mental retardation 30-50%
• Ophthalmologic and hearing impairments
• Speech and language disorders
• Seizures 15-60%
• Oromotor dysfunction

Mental retardation

• This varies greatly
• Many patients with CP are of normal intelligence.
• Approach is based on level of impairment
  – We will discuss Cognitive challenges in more depth as a separate condition
Ophthalmologic and hearing impairments

- We will discuss these as separate topics

Speech and Language disorders

- Hearing impairment may cause this.
- Difficulty coordinating muscles required to speak clearly may contribute.
  - Patient may use a variety of technology to assist them in communicating
  - Patients will frequently understand far more than they can speak. (Receptive language vs. Expressive language)

Oromotor dysfunction

- This can be a big issue for us as Oral Health professionals
- Difficulty chewing and swallowing
- Difficulty clearing food from their mouths
- Difficulty brushing

Oral Manifestations

- Increased caries rate
- Periodontal disease at 3 times the general population
- Enamel hypoplasia (30%)
- Hyperactive gag reflex

Oral Manifestations

- Malocclusion
  - Class II jaw relationship,
  - Protruding maxillary teeth
  - Anterior open bite
  - High, small palate
  - Constricted arches
  - Interceptive orthodontics has a high relapse rate unless permanent retention
- Tongue thrust
- Mouth breathers
- Dysfunctional swallow (Drooling)
- Bruxism (50-60%)

Fractured tooth/ wear facets
Common Medications

- The goal of pharmacotherapy in patients with cerebral palsy is to reduce symptoms (eg, spasticity) and prevent complications (eg, contractures).
- C.P cannot be cured with medicines, or surgery.

Meds

- Neuromuscular Blockers
  - BOTOX
- Muscle relaxants
  - Baclofen use a pump
  - Dantrolene
- Benzodiazepines
- Anticholinergic Agents (manage tremors)
  - Trihexyphenidyl
- Dopamine Prodrugs (regulate muscle movement)
  - Levadopa
- Anticonvulsants
  - Keppra, Trileptal, Depakote, Phenobarbital

Tips for working with C.P. Patients

Also Remember:

- C.P. patients are frequently very spastic
  - They may not be able to lay flat in a chair
  - Knees, and elbows may have contractures
  - Ask the family about range of motion limits.
  - Assisting them with slow gentle pressure

Remember:

- C.P. is not always associated with cognitive impairment
- Because they may have difficulty speaking they may seem less “sharp” mentally than they really are.
- Family and patients are usually helpful
  - They usually know what works
  - And what does not

Also Remember:

- With C.P. many times movements are exaggerated, gag reflex may be extreme.
- May have very tight oral muscles, and powerful tongues.
- May unintentionally bite with great force without warning.
More tips

• If their impairment is severe they may have very sophisticated custom made wheel chairs.
• Sometimes transferring them to your dental chair is difficult.
• You may want to try treating them in their wheel chair, (they usually recline).

• C.P. patients are prone to sudden movements
  – Exaggerated startle reflexes
  – Smooth fine movements may be very difficult
• They may have difficulty with brushing and caring for their teeth.

Home care helpers

Electric tooth brushes may help

A few more pointers

• Bean Bag or Pillow may help
• Some sort of restraint may be helpful.
  – Bite block or Molt
  – Papoose?
• Nitrous Oxide or muscle relaxants such as the benzodiazepines

Bean Bag or Pillow may help
Some sort of restraint may be helpful.

C.P. Risk Factors for Aspiration Pneumonia

- Swallowing problems - Dysphagia
- Immobility
- Spinal deformities
- Tube feeding

Patients may not tolerate a reclined position

- Treatment in a more upright position may be helpful
- Need to keep fluids in their mouth to a minimum
- Lots of suction

- A helpful resource...

C.P. affects treatment planning

- Both what we do
  - High caries rate
  - Destroying restorations
  - Difficulty tolerating and maintaining prostheses
- How we do it
  - May not be able to sit still for lengthy treatment
  - Sharp instruments and unexpected movements...
  - Simply keeping mouth open
  - May have limited tolerance for water spray in their mouths.
Treatment plan considerations

- Remember patients limitations
  - Limited ability to keep clean
  - Hygienic appliances are essential
  - Consider removable verses fixed
- Malocclusions
  - May have posterior only occlusion
  - Often are in posterior cross bite
  - May have no cuspal guidance
- Bruxing
  - Be careful with material and prosthetic design choices
  - Metal occlusal surfaces
  - Amalgam verses Composites

Facility considerations

- Wheelchair accessible?
- Ramps not steps
- Elevators
- Accessible bathrooms
- Room in the operatory

Patients with Developmental challenges

- Many patients have cognitive challenges
- Varies widely, from a little slow, to profoundly impaired
- You need to know what level they function at.
- May be associated with a syndrome such as Down Syndrome, C.H.A.R.G.E Syndrome, Angelman’s Syndrome, and a host of others
  - If patient has a syndrome, be aware of what other problems may be associated with it. Such as congenital heart disease, immune deficiency, seizures, etc.

Questions to ask

- What level do they function at?
  - Often will describe as an age
- Verbal or non verbal?
- Receptive Language vs. Expressive
- How do they act with the physician?
Management very similar to what you would do for a patient with C.P.
• Depends on level of impairment
• Maybe just explaining and treating them as if they are the age they have developed to
• Maybe Nitrous Oxide, or mild Anxiolysis
• Maybe protective immobilization
• Maybe general anesthesia

Referral
• If the patient has extensive needs, and/or is severely impaired and is unable to cooperate.
  – General anesthesia
  – Sedation

Medically compromised Patients
• Far too much for me to cover in detail today.
  – Our residents have over 100 hours of class time on this topic, and that is not enough to cover it.

Understand the disease
• What does it affect?
  – Organ systems, bleeding, infections, etc.
• How does that impact you care?
  – For example a bleeding disorder...

• How is it treated, or managed?
  – Is it treated or is it managed?
  – Will they ever get better, can I postpone treatment until then?
• How does that affect your care?
  – Do the treatments i.e. drugs, surgeries, radiation, etc. cause problems. For example chemo therapy...Radiation to the head and neck...
In Summary
• The main focus when working with medically complex patients, is what organ systems are affected. We are most concerned with:
  – Hemopoietic
    ▪ Platelets and clotting factors
    ▪ Immune system
  – Cardiovascular
    ▪ Functional
    ▪ Structural
  – Pulmonary

An example of a medically complex patient
How do we approach them?

A Patient with Cancer...
• There many kinds of cancers each has its unique set of challenges
• Here we will touch on some concepts that apply generally to any patient on Chemo-therapy and radiation therapy.

Fighting cancer
• Nonsurgical treatment of cancer usually attempts to destroy the cancer cells but spare the healthy cells.
• The fundamental concept is that cancer cells are replicating rapidly, most healthy cells are not.
• Therapy is drugs or energy that targets rapidly replicating cells.

The problem
• Certain healthy, normal cells replicate rapidly too, such as mucosal cells, blood cells both red and white cells.
• These cells play a major role in oral health.
• People receiving Chemotherapy have a number of oral symptoms, and issues when receiving dental care.

Oral Mucositis
• Inflammation of oral mucous membranes
  – Pain
  – Infection
  – Poor nutrition
Xerostomia
- Dry mouth due to thickened reduced or absent salivary flow
  - Increase risk of infection
  - Difficulty speaking, chewing, and swallowing
  - Increased risk of dental caries

Taste alterations
- Changes in ability to taste
  - May taste bad.
  - May not taste at all

Oral Infection
- Damage to mucosa makes patient more susceptible to infection
- Bone marrow suppression leads to immune suppression

Abnormal dental development
- If high dose radiation of chemo treatment before age of 9
  - Altered tooth development
  - Craniofacial growth

Neurotoxic effects
- Patient may experience persistent deep aching and pain that mimic a toothache, with no dental source

Bleeding
- Platelet and clotting factors may be decreased with chemo therapy
Trismus
• Tissue may fibrose with radiation treatments

Osteonecrosis
• Blood vessels may be compromised leading to necrosis of the bone.
• This results in a decreased ability to heal.

How we can help
• Pretreatment dental care
  – Identify and treat problems such as infections, defective restorations and periodontal disease that can lead to complications when cancer treatments start

Helpful Measures
• Stress prevention.
  – High quality oral hygiene
  – Healthy diet
• Supplemental fluoride
  – High dose gel
    • In trays
    • Brush on

Special Considerations
• Consult with their M.D.
• Chemo affects Platelets, red cells, and white cells, we need:
  – Platelets >75,000
  – Absolute neutrophil counts >1000
  – May need antibiotics prior to cleaning or any treatment.

Great resource
• http://www.nidcr.nih.gov/oralhealth/Topics/CancerTreatment/OralComplicationsCancerOral.htm
### An different example: Down Syndrome

- The most common genetic disorder
- Numerous medical, physical and cognitive issues.
  - Hypotonia
  - Brachycephalic, with midface hypoplasia (OSA is very common)
  - Congenital heart disease is very common
  - Neutrophils with defective chemotaxis
  - Proteins important in immune function are encoded on chromosome 21
  - Varying degrees of cognitive impairment

### Oral findings

- Teeth
  - Short roots
  - Missing teeth
  - Microdontia – peg laterals, and premolars
  - Delayed eruption of permanent dentition
- Fissured tongue
- Apparent macroglossia
- Low muscle tone

### Malocclusion

- Small midface, small maxilla
- Crossbite
- Open bite
- Crowded teeth
- Impacted canines
- Delayed eruption

### Periodontal disease and caries

- Increased periodontal disease – not relative to oral hygiene
  - Studies range from 50-95%
  - A consequence of impaired immune function
- Caries risk studies vary

### Manage the problems

- Do they require antibiotic prophylaxis prior to dental care?
- May not be a good candidate for in office sedation due to OSA
- May require extra efforts to manage periodontal disease
- Special prosthetic considerations.
- What is their behavior in the chair like.

### Miscellaneous topics

- There are several special medical devices you will likely encounter when you treat patients with special needs:
  - Gastric Tubes
  - Tracheotomy tubes
Gastric Tube fed patients

Impaction Tube

G-Tubes

- For a variety of reasons a patient may receive their nutrition through a G-tube.
  - Aspiration risk
  - Cannot swallow of chew due to neuromuscular reasons
  - Does not take enough by mouth to be healthy

Impact on Dentition

- No food by mouth reduces caries risk.
- Heavy tartar build up in places you don’t usually see it (e.g. occlusal surfaces of molars)
- Delayed eruption in young children
- Patient may not be used to strong tastes

Tracheostomy Tubes

- Be aware of why the patient has this device.
- Don’t block it with patient napkin or anything else
- Patient may not be able to speak with out closing it off (let them do it themselves)
When in doubt...

- Wikipedia is probably not your best source.
- Consult with the patients M.D.

Questions?

Thanks!