Cushing's Syndrome

Israel Olmos Samaniego
John Guerrero
Jacqueline Hernandez
Cory Jerome

Cushing's Syndrome

Cushing's syndrome is a result of excessive circulating free corticosteroids, caused by unnecessary adrenocortical activity.

Causes

- The use of corticosteroid medication.
- Excessive secretion of adrenocorticotropic hormone (ATCH).
- Primary hyperplasia.
- Ectopic production of ACTH.

Symptoms

- Cardiovascular
  - Hypertension and heart failure.
- Endocrine and metabolic
  - Truncal obesity.
  - Moon face.
  - Buffalo hump.
  - Sodium retention.
  - Metabolic alkalosis.
  - Hyperglycemia.
- Gastrointestinal
  - Peptic ulcers and pancreatitis.

Symptoms cont.

- Muscular
  - Myopathy and muscle weakness.
- Dermatologic
  - Thinning of skin.
  - Ecchymoses.
  - Striae.
- Psychiatric
  - Mood alterations and psychoses.
- Immune functions
  - Impaired wound healing.
  - Increased susceptibility to infections.
  - Decreased inflammatory response.

Diagnostic Findings

- Urinalysis.
- Dexamethasone suppression test.
- Serum cortisol testing.
- Corticotropin testing.
- Blood chemistry analysis.
- Salivary free cortisol analysis.
Diagnostic Findings cont.
- Inferior petrosal sinus sampling.
- Ultrasonography, CT scan, MRI.

Assessment
- Diabetes mellitus.
- Muscle weakness and loss of muscle mass.
- Hypertension.
- Redistribution of fat.
- Poor wound healing.
- Emotional lability.
- Insomnia.

Assessment
Hallmark signs of Cushing's Syndrome:
- Rounded "moon face"
- Fatty "Buffalo Hump" between shoulders
- Truncal obesity
- Hirsutism (excess facial hair)
- Acne, Petechiae
- Skin becomes susceptible to trauma, infection, bruising, edema
- Wounds are slow to heal
- Osteoporosis
- High Blood Pressure

Assessment...
- Assess patient knowledge of Cushing's Syndrome and therapy and their willingness to learn
- Assess patient for changes in physical appearance caused by the glucocorticoid excess
- Assess patient's feeling about the changes in appearance and their coping mechanisms

Buffalo Hump

Striae
Nursing Diagnoses

- Risk for infection related to altered protein metabolism and inflammatory response
- Risk for injury related to weakness
- Self-care deficit related to weakness, fatigue, and muscle wasting
- Disturbed body image related to changes in physical appearance and decreased activity
- Impaired skin integrity related to thin and fragile skin and impaired healing
- Disturbed thought process related to mood swings, irritability and depression

Planning

- Decrease risk of injury
- Detect early signs and symptoms of infection
- Increase ability to carry out self-care activities
- Improve skin integrity
- Improve body image
- Improve mental functioning
- Absence of complications

Nursing Diagnosis & Interventions

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Actions/Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk for injury related to:</td>
<td>Increase calcium, vitamin D and protein in diet</td>
</tr>
<tr>
<td>Decreased bone density</td>
<td>Assess skin for signs of bruising, breakdown, wounds not healing, changes in height</td>
</tr>
<tr>
<td>Increased capillary fragility</td>
<td>Instruct patient about safety measures to reduce risk for falls and injury</td>
</tr>
<tr>
<td>Poor wound healing</td>
<td></td>
</tr>
</tbody>
</table>

Nursing Diagnosis & Interventions

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Actions/Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disturbed body image related to:</td>
<td>Reassure patient that physical changes are a result of the increased hormone levels and will most likely resolve when those levels return to normal</td>
</tr>
<tr>
<td>Abnormal fat distribution, moon face, cervicodorsal fat, muscle wasting, striae, hirsutism, acne</td>
<td>Promote coping methods to help patient deal with changes in appearance, clothing and grooming</td>
</tr>
<tr>
<td></td>
<td>Assist patient in locating a support group</td>
</tr>
</tbody>
</table>

Nursing Diagnosis & Interventions

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Actions/Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk for infection related to:</td>
<td>Assess patient frequently for signs of infection such as an increase in temperature</td>
</tr>
<tr>
<td>Altered protein metabolism and inflammatory response</td>
<td>Have the patient avoid others with infection</td>
</tr>
<tr>
<td></td>
<td>Check the mouth, lungs, and skin for early signs of infection</td>
</tr>
</tbody>
</table>

Nursing Diagnosis & Interventions

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Actions/Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impaired skin integrity related to:</td>
<td>Assess patient’s skin</td>
</tr>
<tr>
<td>Edema, impaired healing, and thin and fragile skin</td>
<td>Avoid using adhesive tape</td>
</tr>
<tr>
<td></td>
<td>Encourage and assist the patient to change positions frequently to prevent skin breakdown</td>
</tr>
</tbody>
</table>
Nursing Diagnosis & Interventions

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Actions/Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self care deficit related to: weakness, fatigue, muscle wasting, and altered sleep patterns.</td>
<td>- Assess the patient’s ability to perform self-care activities. - Encourage moderate activity. - Patient should be reassured that symptoms will subside with treatment. - Help patient plan rest periods throughout the day.</td>
</tr>
</tbody>
</table>

Medical Management
- Surgery for tumors of the adrenal and pituitary glands.
- Radiation therapy.
- Drug therapy.

Monitoring and Managing Potential Complications

Addisonian crisis
- May result from:
  - withdrawal of corticosteroids
  - adrenalectomy
  - removal of a pituitary tumor.
- Adverse effects of adrenocortical activity

Promoting Home and Community-Based Care
1. Teach the pt with Cushing’s syndrome and the family what problems could arise and how to manage those that cannot be prevented.
2. Explain what could happen if the pt stops taking the corticosteroids.
3. Talk to the pt about dietary modifications.
4. Teach how to monitor blood glucose levels, blood pressure and weight.

Promoting Home and Community-Based Care cont.
5. Pt that had a adrenalectomy or removal of a pituitary tumor need close monitoring.
6. If you are a nurse giving homecare to a pt with Cushing’s syndrome make sure you assess the pt psychological and physical status.
7. Emphasize the importance of having a regular medical follow-up, knowing side effects of medications and wearing a medical identification bracelet.

Evaluation
1. Decreases risk of injury
2. Decreases risk of infection
3. Increases participation in self-care activities
4. Attains/maintains skin integrity
5. Achieves improved body image
6. Exhibits improved mental functioning
7. Exhibits absence of complications
Cushing Syndrome

Questions
- The pathophysiology that occurs in Cushing's syndrome is...
  A. a result of an oversecretion of insulin
  B. a result from an undersecretion of insulin
  C. a result from an undersecretion of mineralocorticoid hormones
  D. a result from an increase pituitary secretion of adrenocorticotropic hormone

Questions
- Cushing's disease is caused by an excessive secretion of which hormones?
  corticosteroids

Questions
- An abnormal distribution of fat becomes deposited in
  A. the ankle region..."cankles"
  B. the trunk region and between the shoulders
  C. the elbows
  D. the earlobes
Questions

- Administration of corticosteroids may produce Cushing's disease (T/F).

True

Questions

- The patient with Cushing disease should receive increased amounts of salt (T/F)

False. Diet low in calories, carbohydrates and sodium. Ample amounts of protein and potassium

REFERENCES

