

Nursing Practice Paper, APA Style (Riss)

Running head: ALL AND HTN IN ONE CLIENT

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The header consists of a shortened title in all capital letters at the left margin and the page number at the right margin; on the title page only, the shortened title is preceded by the words "Running head" and a colon.

Acute Lymphoblastic Leukemia and Hypertension in One Client:
A Nursing Practice Paper
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Full title, writer's name, and school halfway down the page.

Author Note

This paper was prepared for Nursing 451, taught by Professor Durham. The author wishes to thank the nursing staff of Milltown General Hospital for help in understanding client care and diagnosis.

An author's note lists specific information about the course or department and can provide acknowledgments and contact information.

Marginal annotations indicate **APA-style formatting** and **effective writing**.

Source: Hacker Handbooks (Boston: Bedford/St. Martin's, 2011, 2007).

This paper follows the style guidelines in the *Publication Manual of the American Psychological Association*, 6th ed. (2010).

Full title, repeated.

Acute Lymphoblastic Leukemia and Hypertension in One Client:
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Headings mark the sections of the report and help readers follow the organization. Main headings are centered and boldface. Second-level headings are flush left and boldface.

Historical and Physical Assessment

Physical History

Riss begins by summarizing the client's history using information from his chart and her interview.

E.B. is a 16-year-old white male 5'10" tall weighing 190 lb. He was admitted to the hospital on April 14, 2006, due to decreased platelets and a need for a PRBC transfusion. He was diagnosed in October 2005 with T-cell acute lymphoblastic leukemia (ALL), after a 2-week period of decreased energy, decreased oral intake, easy bruising, and petechia. The client had experienced a 20-lb weight loss in the previous 6 months. At the time of diagnosis, his CBC showed a WBC count of 32, an H & H of 13/38, and a platelet count of 34,000. His initial chest X-ray showed an anterior mediastinal mass. Echocardiogram showed a structurally normal heart. He began induction chemotherapy on October 12, 2005, receiving vincristine, 6-mercaptopurine, doxorubicin, intrathecal methotrexate, and then high-dose methotrexate per protocol. During his hospital stay he required packed red cells and platelets on two different occasions. He was diagnosed with hypertension (HTN) due to systolic blood pressure readings consistently ranging between 130s and 150s and was started on nifedipine. E.B. has a history of mild ADHD, migraines, and deep vein thrombosis (DVT). He has tolerated the induction and consolidation phases of chemotherapy well and is now in the maintenance phase, in which he receives a daily dose of mercaptopurine, weekly doses of methotrexate, and intermittent doses of steroids.

Riss respects the client's privacy by using only his initials in her paper.

Psychosocial History

There is a possibility of a depressive episode a year previously when he would not attend school. He got into serious trouble and

was sent to a shelter for 1 month. He currently lives with his mother, father, and 14-year-old sister.

Family History

Paternal: prostate cancer and hypertension in grandfather

Maternal: breast cancer and heart disease

Current Assessment

Client's physical exam reveals him to be alert and oriented to person, place, and time. He communicates, though not readily. His speech and vision are intact. He has an equal grip bilaterally and can move all extremities, though he is generally weak. Capillary refill is less than 2 s. His peripheral pulses are strong and equal, and he is positive for posterior tibial and dorsalis pedis bilaterally. His lungs are clear to auscultation, his respiratory rate is 16, and his oxygen saturation is 99% on room air. He has positive bowel sounds in all quadrants, and his abdomen is soft, round, and nontender. He is on a regular diet, but his appetite has been poor. Client is voiding appropriately and his urine is clear and yellow. He appears pale and is unkempt. His skin is warm, dry, and intact. He has alopecia as a result of chemotherapy. His mediport site has no redness or inflammation. He appears somber and is slow to comply with nursing instructions.

Medical Diagnosis #1: Acute Lymphoblastic Leukemia

Leukemia is a neoplastic disease that involves the blood-forming tissues of the bone marrow, spleen, and lymph nodes. In leukemia the ratio of red to white blood cells is reversed. There are approximately 2,500 cases of acute lymphoblastic leukemia (ALL) per year in the United States, and it is the most common

Riss describes her detailed assessment of the client, using appropriate medical terminology.

Assessment uses a neutral tone.

APA allows extra space above headings when it improves readability.

type of leukemia in children—it accounts for 75%-80% of childhood leukemias. The peak age of onset is 4 years, and it affects whites more often than blacks and males more often than females. Risk factors include Down syndrome or genetic disorders; exposures to ionizing radiation and certain chemicals such as benzene; human T-cell leukemia/lymphoma virus-1; and treatment for certain cancers. ALL causes an abnormal proliferation of lymphoblasts in the bone marrow, lymph nodes, and spleen. As the lymphoblasts proliferate, they suppress the other hematopoietic elements in the marrow. The leukemic cells do not function as mature cells and so do not work as they should in the immune and inflammatory processes. Because the growth of red blood cells and platelets is suppressed, the signs and symptoms of the disease are infections, bleeding, pallor, bone pain, weight loss, sore throat, fatigue, night sweats, and weakness. Treatment involves chemotherapy, bone marrow transplant, or stem cell transplant (LeMone & Burke, 2004).

Riss paraphrases the source and uses an APA-style in-text citation.

Medical Diagnosis #2: Hypertension

Primary hypertension in adolescence is a condition in which the blood pressure is persistently elevated to the 95th to 99th percentile for age, sex, and weight (Hockenberry, 2003). It must be elevated on three separate occasions for diagnosis to be made. Approximately 50 million people in the United States suffer from hypertension. It most often affects middle-aged and older adults and is more prevalent in black adults than in whites and Hispanics. In blacks the prevalence between males and females is equal, but in whites and Hispanics more males than females are affected. Risk

Riss demonstrates her understanding of the medical condition.

factors include family history, age, race, mineral intake, obesity, insulin resistance, excess alcohol consumption, smoking, and stress. Hypertension results from sustained increases in blood volume and peripheral resistance. The increased blood volume causes an increase in cardiac output, which causes systemic arteries to vasoconstrict. This increased vascular resistance causes hypertension. Hypertension accelerates the rate of atherosclerosis, increasing the risk factor for heart disease and stroke. The workload of the heart is increased, causing ventricular hypertrophy, which increases risk for heart disease, dysrhythmias, and heart failure. Early hypertension usually exhibits no symptoms. The elevations in blood pressure are temporary at first but then progress to being permanent. A headache in the back of the head when awakening may be the only symptom. Other symptoms include blurred vision, nausea and vomiting, and nocturia. Treatment involves medications such as ACE inhibitors, diuretics, beta-adrenergic blockers, calcium channel blockers, and vasodilators as well as changes in diet, such as decreased sodium intake. An increase in physical activity is essential to aid in weight loss and to reduce stress (LeMone & Burke, 2004).

Chart Review

Active Orders

Vital signs q4h

Fall precautions

OOB as tolerated

Oximetry monitoring—continuous

CBC with manual differential daily in am

Riss uses
specialized medical
terminology.

Regular diet

Weight—daily

Strict intake and output monitoring

Type and cross match

PRBCs—2 units

Platelets—1 unit

Discharge after CBC results posttransfusion shown to MD

Rationale for Orders

Vital signs are monitored every four hours per unit standard.

In addition, the client's hypertension is an indication for close monitoring of blood pressure. He has generalized weakness, so fall precautions should be implemented. Though he is weak, ambulation is important, especially considering the client's history of DVT. A regular diet is ordered—I'm not sure why the client is not on a low-sodium diet, given his hypertension. Intake and output monitoring is standard on the unit. His hematological status needs to be carefully monitored due to his anemia and thrombocytopenia; therefore he has a CBC with manual differential done each morning. In addition, his hematological status is checked posttransfusion to see if the blood and platelets he receives increase his RBC and platelet counts. Transfused platelets survive in the body approximately 1-3 days, and the peak effect is achieved about 2 hr posttransfusion. Though platelets normally do not have to be cross-matched for blood group or type, children who receive multiple transfusions may become sensitized to a platelet group other than their own. Therefore, platelets are cross-matched with the donor's blood components. Blood and platelet transfusions may result in hemolytic, febrile, or

Riss shows how physiology, pre-scribed treatments, and nursing practices are related.

allergic reactions, so the client is carefully monitored during the transfusion. Hospital protocol requires a set of baseline vital signs prior to transfusion vital signs. After the blood and platelets have been given, the physician is apprised of CBC results to be sure that the client's thrombocytopenia has resolved before he is discharged.

Pharmacological Interventions and Goals

Medications and Effects

ondansetron hydrochloride (Zofran) 8 mg PO PRN	serotonin receptor antagonist, antiemetic—prevention of nausea and vomiting associated with chemotherapy
famotidine (Pepcid) 10 mg PO ac	H ₂ receptor antagonist, antiulcer agent—prevention of heartburn
nifedipine (Procardia) 30 mg PO bid	calcium channel blocker, antihypertensive—prevention of hypertension
enoxaparin sodium (Lovenox) 60 mg SQ bid	low-molecular-weight heparin derivative, anticoagulant—prevention of DVT
mercaptopurine (Purinethol) 100 mg PO qhs	antimetabolite, antineoplastic—treatment of ALL
PRBCs—2 units leukoreduced, irradiated ^a	to increase RBC count
platelets—1 unit ^a	to treat thrombocytopenia

^a Because these products are dispensed by pharmacy, they are considered a pharmacological intervention, even though technically not medications.

Short tables, like those in this paper, are placed within the text. A longer table can be placed on a separate page.

Laboratory Tests and Significance

Riss presents data in several tables for easy reference.

Complete Blood Count (CBC)^a

Result name	Result	Abnormal	Normal range
WBC	3.0	*	4.5-13.0
RBC	3.73	*	4.20-5.40
Hgb	11.5		11.1-15.7
Hct	32.4	*	34.0-46.0
MCV	86.8		78.0-95.0
MCH	30.7		26.0-32.0
MCHC	35.4		32.0-36.0
RDW	14.6		11.5-15.5
Platelet	98	*	140-400
MPV	8.3		7.4-10.4

^a*Rationale:* Client's ALL diagnosis and treatment necessitate frequent monitoring of his hematological status. WBC count is decreased due to chemotherapy, as are RBC and hematocrit. The platelet count is low as well.

Type and Cross-Match^a

Result name	Result
ABORH	APOS
ANTIBODY SCR INTERP	NEGATIVE

^a*Rationale:* To determine client's blood type and to screen for antibodies.

Vital Signs Before, During, and After Blood Transfusion^a

Vital signs	Time	BP	Pulse	Resp	Temp (oral)
Pre	1705	113/74	92	18	98.7
15 min	1720	118/74	104	12	98.3
30 min	1735	121/74	96	16	99.3
45 min	1750	129/76	101	16	99.3
Post	1805	108/59	99	15	98.9

^a*Rationale:* To monitor for reaction.

Nursing Diagnosis #1:
**Injury, Risk for, Related to Decreased Platelet
Count and Administration of Lovenox**

Desired Outcome: Client will remain free of injury.

Interventions

Monitor vital signs q4h

Assess for manifestations of bleeding such as

- Skin and mucous membranes for petechiae, ecchymoses, and hematoma formation
- Gums and nasal membranes for bleeding
- Overt or occult blood in stool or urine
- Neurologic changes

Provide sponge to clean gums and teeth

Apply pressure to puncture sites for 3-5 min

Avoid invasive procedures when possible

Administer stool softeners as prescribed

Implement fall precautions

Monitor lab values for platelets

Administer platelets as prescribed

Measurable Outcomes

Mediport site will remain intact with no signs of bleeding.

Urine and stool will remain free of blood.

Lab values for anticoagulant therapy will remain in desired range.

Platelet count will remain in normal range.

Client Teaching

Instruct client to avoid forcefully blowing nose, straining to have a bowel movement, and forceful coughing or sneezing, all of which increase the risk for external and internal bleeding

Riss prioritizes her diagnoses and recommended interventions and gives a detailed description and rationales for each.

Riss uses specific examples.

Discharge Planning

Instruct client to monitor for signs of decreased platelet count
such as easy bruising, petechiae, or inappropriate bleeding

Nursing Diagnosis #2:

Infection, Risk for, Related to Depressed Body Defenses

Desired Outcome: Client will remain free of infection.

Interventions

Screen all visitors and staff for signs of infection to minimize
exposure to infectious agents

Use aseptic technique for all procedures

Monitor temperature to detect possible infection

Evaluate client for potential sites of infection: needle punctures,
mucosal ulcerations

Provide nutritionally complete meals to support the body's natural
defenses

Monitor lab values for CBC

Administer G-CSF if prescribed

Measurable Outcomes

Mediport site will remain free of erythema, purulent drainage,
odor, and edema.

Client will remain afebrile.

Client Teaching

Instruct client and caregivers in correct hand-washing technique

Discharge Planning

Instruct client and caregivers to avoid live attenuated virus
vaccines

Instruct client to avoid large crowds

Nursing Diagnosis #3:

Noncompliance, Related to HTN, as Evidenced by Lack of Consistent Medication Regimen and Adherence to Dietary Plan

Desired Outcome: Client will follow treatment plan.

Interventions

Inquire about reasons for noncompliance

Listen openly and without judgment

Evaluate knowledge of HTN, its long-term effects, and treatment

Arrange for nutritional consult with dietitian

Measurable Outcomes

Client will take medication as prescribed.

Client's systolic blood pressure will remain in normal range.

Client Teaching

Instruct on medication regimen: appropriate administration and potential adverse effects

Provide information on hypertension and its treatment

Discharge Planning

Provide prescriptions

Nursing Diagnosis #4:

Health Maintenance, Ineffective, Related to Unhealthy Lifestyle and Behaviors

Desired Outcome: Client will make changes in lifestyle.

Interventions

Assist in identifying behaviors that contribute to hypertension

Assist in developing a realistic health maintenance plan including modifying risk factors such as exercise, diet, and stress

Help client and family identify strengths and weaknesses in maintaining health

Measurable Outcomes

Client will verbalize ways to control his hypertension.

Client will identify methods to relieve stress.

Discharge Planning

Provide information on possible exercise programs

Analysis

In the case of E.B., there are two separate disease processes at work—ALL and HTN. The ALL is the most immediately pressing of the two and is indirectly responsible for the client's current hospitalization. The chemotherapy treatment for his leukemia has caused thrombocytopenia. This condition places him at high risk for hemorrhage. The anticoagulant therapy for DVT increases this risk even further, not only because it may cause bleeding complications, but because in itself it may cause thrombocytopenia. Therefore, it is imperative to raise his platelet count as quickly as possible. Surprisingly, there were no lab tests ordered to determine his PT and INR, both of which are monitored when a client is on anticoagulant therapy. As his CBC demonstrates, not only is his platelet count low, but his red blood cells are decreased. That is why his physician ordered a transfusion of both PRBCs and platelets.

In terms of E.B.'s diagnosis of HTN, he has a positive family history, which is a major risk factor for developing the disease. Excess weight is also a risk factor, and the client has a history

Riss summarizes the client's conditions, treatments, and consequences for nursing and discusses client education in psychological and social contexts.

of obesity as well. Because exercise is an important factor in managing the excess weight and stress associated with the disease, his leukemia and the chemotherapy treatments aimed at curing E.B.'s leukemia actually negatively affect his ability to manage the hypertension: He is often too weak and fatigued to participate in much physical activity. Additionally, the steroids have resulted in added weight gain, increasing instead of decreasing the problem. To date, the client has failed to maintain a favorable diet regimen.

E.B.'s family circumstances must be taken into consideration when managing his treatment. Though he resides with both parents, there is some question as to the support and consistency of care he receives. He often appears very unkempt and is at times noncompliant with his hypertension medication. Due to his parents' inability to care for a central venous line (CVL) at home, he has a mediport that can be accessed as needed but requires care. On a positive note, the father is aware of their limitations and tries to work with the staff to make sure that E.B.'s ALL is managed appropriately.

Riss provides a reference list for sources she cited in her paper. The list is formatted in APA style.

References

- Hockenberry, M. (2003). *Wong's nursing care of infants and children*. St. Louis, MO: Mosby.
- LeMone, P., & Burke, K. (2004). *Medical-surgical nursing: Critical thinking in client care*. Upper Saddle River, NJ: Pearson Education.