Tonsillitis

CASE STUDY:

A 5-year-old girl was taken to the primary health care physician because she was having sore throat, high temperature and runny nose. Symptoms started a couple of days ago and her mother reported that she also complained of pain in the right ear at night. The doctor examined her tonsils and found them enlarged, and checked her ears with the otoscope and saw that both eardrums were congested and looked reddish especially on the right. He recommended decongestant medication and analgesics and requested to see the girl again a week later. (http://anatomy.med.umich.edu/nervous\_system/ear\_case.html)

Background Information:

* Tonsils = two lumps of lymphoid tissue in the back of the throat
* Tonsils trap germs and destroy disease-causing microorganisms.
* Tonsillitis = inflammations/infection of tonsils, contagious
  + Contagious = condition can be transmitted to other people
* Symptoms:
  + Sore throat
  + Pain that can extend to ears
  + Headache
  + Fever (105 to 106)
  + Chills
  + Loss of appetite
  + Fatigue
  + Yellow pus present in tonsils area
* Treatment
  + Bed rest
  + Fluids
  + Analgesics (aspirin/acetaminophen)
  + Bacterial infection: antibiotic (amoxicillin, ampicillin, erythromycin)

NARSESE Translation

<(\*, {John-Doe}, 5) --> age>.

<{John-Doe} --> [sore-throat]>.

<{John-Doe} --> [high-temperature]>.

<{John-Doe} --> [runny-nose]>.

<{John-Doe} --> [earache]>.

<(\*, [tonsillitis], [tonsils]) --> infection>.

<tonsillitis --> infection>.

<(\*, tonsillitis, tonsil) --> location>.

<[tonsillitis] --> [sore-throat]>.

<(\*, [tonsillitis], [ear]) --> pain>.

<<#x --> [tonsillitis]> ==> <#x --> [earache]>>.

<[tonsillitis] --> [headache]>.

<<#x --> [tonsillitis]> ==> <(\*, #x, 104) --> temperature-above>>.

<[tonsillitis] --> [chills]>.

<[tonsillitis] --> [loss-of-appetite]>.

<[tonsillitis] --> [fatigue]>.

<[tonsillitis] --> [yellow-pus]>.

<<#x --> [tonsillitis]> ==> <(\*, bed-rest, {#x}) --> Initial-diagnosis>>.

<<#x --> [tonsillitis]> ==> <(\*, fluids, {#x}) --> Initial-diagnosis>>.

<<#x --> [tonsillitis]> ==> <(\*, analgesic, {#x}) --> Initial-diagnosis>>.

<aspirin --> analgesic>.

<acetaminophen --> analgesic>.

<(&&, <#x --> [tonsillitis]>, <#x --> [bacterial-infection]) ==> (\*, [antibiotic], #x) --> treatment)>.

<ampicillin --> antibiotic>.

<amoxicillin --> antibiotic>.

<erythromycin --> antibiotic>.

<[high-temperature] --> [tonsillitis-symptom]>. (1.00, .20)

<[runny-nose] --> [tonsillitis-symptom]>. (1.00, .15)

<[earache] --> [tonsillitis-symptom]>. (1.00, .10)

STEP-BY-STEP

INPUT

<{John-Doe} --> [sore-throat]>.

<[sore-throat] --> [tonsillitis-symptom]>. %1.00: 0.40%

<[tonsillitis-symptom] --> [tonsillitis]>.

<<#x --> [tonsillitis]> ==> <(\*, analgesic, {#x}) --> Initial-diagnosis>>.

<aspirin --> analgesic>.

<[high-temperature] --> [tonsillitis-symptom]>. (1.00, .20)

<[runny-nose] --> [tonsillitis-symptom]>. (1.00, .15)

<[earache] --> [tonsillitis-symptom]>. (1.00, .10)

OUTPUT

<(\*,analgesic,{[tonsillitis-symptom]}) --> Initial-diagnosis>. %1.00;0.73% {33032 : 4;3}

(1)

IN: <{John-Doe} --> [high-temperature]>. %1.00;0.90% {0 : 1}

IN: <[high-temperature] --> [tonsillitis-symptom]>. %1.00;0.90% {0 : 2}

1

OUT: <{John-Doe} --> [tonsillitis-symptom]>. %1.00;0.81% {1 : 2;1}

(2)

IN: <{John-Doe} --> [runny-nose]>.

IN: <[runny-nose] --> [tonsillitis-symptom]>.

IN: <{John-Doe} --> [tonsillitis-symptom]>.

OUT: <{John-Doe} --> [runny-nose]>. %1.00;0.81%

(3)

IN: <{John-Doe} --> [earache]>.

IN: <[earache] --> [tonsillitis-symptom]>.

IN: <{John-Doe} --> [tonsillitis-symptom]>.

OUT: <{John-Doe} --> [earache]>. %1.00;0.81%

(4)

IN: <{John-Doe} --> [runny-nose]>. %1.00;0.81%

IN: <{John-Doe} --> [earache]>. %1.00;0.81%

OUT: <{John-Doe} --> [earache, runny-nose]>. %1.00;0.66%

(5)

IN: <{John-Doe} --> [earache, runny-nose]>. %1.00;0.66%

IN: <[earache] --> [tonsillitis-symptom]>.

IN: <[runny-nose] --> [tonsillitis-symptom]>.

IN: <[tonsillitis-symptom] --> [tonsillitis]>.

OUT: <{John-Doe} --> [tonsillitis]>. %1.00;0.59%

(6)

IN: <{John-Doe} --> [tonsillitis]>. %1.00;0.59%

IN: <<#x --> [tonsillitis]> ==> <(\*, analgesic, {#x}) --> Initial-diagnosis>>.

IN: <aspirin --> analgesic>.

OUT: <(\*,analgesic,{{John-Doe}}) --> Initial-diagnosis>. %1.00;0.66%