Construction of Local Terminology Dictionary in NM Imaging Report Forms

Kyung-Hoon Hwang^a, Ji-Young Jeong^a, Kuk-Yang Park^a

^aGachon University of Medical Science. Gil Medical Center, Incheon, South Korea

Abstract

It is difficult to settle the well-designed local terminology for imaging report in the hospital information system (HIS). One of the major reasons is the local terminology with poor contents have been used in the hospital. Thus, we mapped the locally used terms in nuclear medicine imaging report to the SNOMED-CT, which had been widely used in the electronic medical record system, for implementation of hospital information system. Preliminary construction of terminology dictionary was done by mapping of local terms to SNOMED-CT and LexCare Suite. Further study may be warranted

Keywords: Local terminology, SNOMED-CT, electronic medical record

Introduction

It is difficult to settle the well-designed imaging report terminology in the hospital information system (HIS). One of the major reasons is the local terminology with poor contents have been used in the hospital[1]. Thus, we evaluated the interchangeability of the imaging report terminology used in our institute, mapping the imaging report terms to the well-established reference terminology, SNOMED-CT system and constructed the preliminary local terminology dictionary for implementation in the hospital information system (HIS).

Materials and Methods

We mapped our local imaging report terms with the SNOMED-CT terminology system, using CliniClue Browser (0901Intl), by two physicians. CiDD editor [2] and LexCare Suite [3] were used for the terms having corresponding Korean terms. Mapping results were classified into lexical, semantic, post-coordination and no mapping, and analysed.

Results

The mapping of the imaging terminology data dictionary (ITDD) with the SNOMED-CT terminology system has been being undertook.using CiDD editor and Lexcare Suite.

Preliminary results of mapping shows that most terms were mapped semantically and by post-coordination (70%), a small proportion of terms lexically (23%), reflecting the difference between the clinical and imaging report terms. good, but, more detailed results and local terminology dictionary will be obtained after the full mapping is accomplished. More studies are under testing.

Fig 1. Illustration of mapping of the local imaging report terms to the SNOMED terminology system,

n	■ B B B B B B B B B B B B B	0 - Q E -	21 21 10 45	100% - 8	158		- 11 - 24 27 25	医医毒形	w % •	14.21 使使	
	월 대 등 전 등 전 및 원 원 1 전 변경 내용과 함께 하신(C) 경로 윤나기된							Mark KeyWords @ Build ARFF File			
. A - 8.											
	A	В		D	E	F	G	Н	1	J	
1	핵의학 판독 용어		Snowed CID	Snowed CID	Snowed CID	mapping type		DD ID	ED ID	mapping typ	
	Scintigraphy	373205008				1	Scintigraphy	D00101462			
	Bone scan	41747008					RN bone scan	D00075793			
	renal scan	241354002					renal scan	D00186758			
	increase	260366006					increased(일반적인)				
	uptake	228857000					uptake(일반적인)	D00101905?			
	PET	32918005				1	PET	D00126780			
	abdominal pain	21522001				1					
9	Motor Vehicle Accident	418399005				1					
	left anide pain	7771000	247373008			- 2					
11	Motor Vehicle Accident	418399005				1					
	right hemiparesis	24028007	20022000			2					
13	abdominal pain	21522001									
4	right breast pain	24028007	53430007								
	right and left extremity tingling sensation	51440002	68019005	162249002							
16	low blood pressure	62482003	75367002								
	left hemiparesis	7771000	20022000								
	left leg pain	7771000	182281004	22253000							
	left chest pain	7771000	29857009								
	left hip pain	7771000	49218002								
	fall	1912002				- 1					
	Bight lower quadrant pain	255495000	22253000								
	right hand dog bite	24028007	85562004	125198007							
	right arm weakness	24028007	249944006	120100001							
	right upper quadrant pain	255497008	22253000								
	mentally confused	162702000	22200000								
	left limb weakness	7771000	309774006			- 2					
	right and left lower leg pain	51440002		182281004	22253000	- 2					
	itching sensation	418290006	201122009	102201004	22253000						
30	ILLIII I SEI SEIDEN	410230000									
31											
32											
33											

Acknowledgments

The authors thank Joo-Young Kim Gachon University Gil Hospital for the help of mapping of imaging report terms.

References

- [1] HL7 Version 3, Health Level Seven, Inc, http://www.hl7.org.
- [2] Open Health Tools of center for EHR: CiDD Editor,
- [3] Open Health Tools of center for EHR: Lexcare Suite,

Address for correspondence

Dr. Kyung Hoon Hwang Department of Nuclear Medicine Gachon University of Medical Science, Gil Medical Center. 1198, Guwol-Dong, Namdong-Gu, Incheon, 405-760, South Korea. E-mail: khhwang@gilhospital.com